

Deadlock on Strike Issues Continues After President Consults Both Sides

**Outcome hinges on further negotiations
as motor makers take firm stand against
union recognition**

WASHINGTON, March 22—The President's conference with the automotive labor group ended here this evening without any definite evidence of the outcome of the negotiations.

It was stated informally at the White House that some progress was being made toward settlement, but that no prediction of the outcome could be made at this time. Meanwhile the strike is being held off pending further developments.

The manufacturers, who conferred with the President yesterday, at which time it is reported they stood their ground, are remaining in Washington at Mr. Roosevelt's request, as are the labor representatives.

On emerging from today's meeting, A. F. of L. President Green said: "We had a very pleasing and most interesting conference with the President and in my judgment substantial progress is being made toward settlement of the dispute between the automobile manufacturers and their employees."

General Johnson, who remained throughout the conference, said: "It looks brighter but you can't tell until it is all over."

While it was stated that there would be further negotiations, it was not indicated what form they would take. President Green said, however, that he did not expect there would be a joint meeting of the labor group and the manufacturers. The indications are that no specific plan for settlement was mapped out. Briefly, the situation is described as one of hopefulness rather than one of assurance that a strike would be avoided.

Present at the conference were General Johnson, Secretary of Labor Perkins, William Green, William Collins,

Federation organizer, and the following local union representatives: A. Greer, Hudson; J. Bailey, Buick; A. Cook, Fisher at Flint; D. Lano, Chevrolet; L. Bentley, Nash, and R. Bryd, Pontiac.

The White House conference with automotive leaders on Wednesday afternoon and with labor leaders today marked the climax of the tensest week in automotive history. The motor chiefs were with the President from 2.30 to 4.45, but nothing was revealed as to what transpired other than a routine

announcement that "The meeting today with the automobile manufacturers canvassed the situation from the employers' side and the President asked for information on many points." The manufacturers emerged tight-lipped and refusing all comment.

Representing the industry at the conference were Alvan Macauley, Packard and N.A.C.C. president, C. W. Nash, president of Nash Motors, Walter P. Chrysler, Chrysler board chairman, Roy D. Chapin, Hudson board chairman, Alfred P. Sloan, Jr., G. M. president, Donaldson Brown, G. M. vice-president, Nicholas Kelley, Chrysler and John Thomas Smith, G. M. general counsel. NRA was represented by General Hugh S. Johnson.

The industry's representatives incidentally were not authorized to make any commitments, but simply empowered to confer and report back to the N.A.C.C. directors.

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Leaving the White House after their conference with President Roosevelt are (left to right): Donaldson Brown; Alfred P. Sloane, Jr.; Alvin Macauley; Walter P. Chrysler; Nicholas Kelly; C. W. Nash; John T. Smith and Roy D. Chapin.

Despite the lack of official statements regarding what happened at the White House conference with the manufacturers, it was accepted both in Washington and Detroit that the industry's representatives had not receded from their position that they would not recognize the unions as such nor enter into any contracts with them, and that they would not deal with any persons claiming to represent the workers without proof of whom they represented. To facilitate presentation of such proof, it is understood that the manufacturers earlier had proposed the creation of an impartial board to which the unions might submit lists of their members. This board, under the reported plan, would then turn the lists over to the manufacturers, the idea being that the impartial board could then check to see if there had been any discrimination against workers on the lists. It is understood that this proposal was rejected by the union leaders.

After the word got around that the manufacturers had not receded from their position in their conference with the President, a statement from the A. F. of L. was issued urging use of the licensing power granted under the Recovery Act. President Green also revealed that he was urging union leaders from Michigan to limit themselves to two demands: a neutral board to pass on alleged discrimination, and an election for the selection of representatives.

During the day, the possibility that the licensing provision of the Recovery Act might be used for the first time was widely discussed. Conjecture along this line was stimulated by the fact that the Attorney General went into conference with the President after the motor manufacturers had left. On emerging, he was asked if licensing was under consideration and he replied that the reporter was "not a bad guesser."

Wednesday was also marked by a statement by William Collins, A. F. of L. leader in Detroit, just prior to his departure for Washington, that unless the right of collective bargaining was recognized, the strike would take place. He also said three major complaints of labor were the displacement of workers by mechanization, concentration of production in eight months, and espionage by the employers. His remarks indicated that he held the manufacturers responsible for the seasonal nature of the production curve.

Another development on Wednesday was a statement from the Washington headquarters of the Federation that 800 workers in the Atlanta Chevrolet plant had joined the union and that additional members had been gained in the Fisher plant in that city, because of resentment over the full page advertisement addressed to the workers which the N.A.C.C. inserted in Tuesday's newspapers. These advertisements were flayed by Federation President Green as an attempt to confuse the issues and as a mis-statement of the facts. Copy of the advertisement which

Automotive Industry

A full-page advertisement which appeared in leading newspapers on March 20

To Employees of the Automobile Industry

This is what is happening:

The American Federation of Labor and other outside unions are trying to force you to join their union and pay dues to support professional labor leaders.

They are trying to destroy the present satisfactory arrangement between you and the management under which your right to collective bargaining is fully recognized.

These employee representation plans—which the labor leaders call company unions—have been set up by more than 80 per cent of the employees themselves. They are working satisfactorily. Any one of you can see his supervisory officer at any reasonable time and settle any questions that may arise. Most of the questions that have come up have been peacefully settled.

No one has to join any union. Your employment does not depend on your membership or non-membership in any organization. It depends on merit alone.

The outside labor leaders are trying by force, by coercion, by intimidation of you and your families and threat of strike to make you join their union. Regardless of what you want, these labor leaders want the right to speak for all of you. They want dues-paying members.

But the N.I.R.A. does not say that the American Federation of Labor or any other union shall speak for you.

It is up to each one of you to decide for yourself whether these outside unions can secure any right that you cannot secure for yourself.

It is up to you to say whether you want to surrender to professional labor leaders your own right to deal with the management of your companies.

To get what they want, regardless of what you want, the American Federation of Labor is using its usual weapons, namely a threat to call a strike.

Sunday's newspapers quoted William Green, president of the American Federation of Labor, as saying: "The question as to whether a strike in the automobile industry involving more than 100,000 workers shall or shall not occur on Wednesday morning, March 21, rests with the automobile manufacturers. Their decision will decide the question. The cause of the strike is directly traceable to the attempt of the automobile manufacturers to impose company unions upon their workers and to force them to accept."

That is not the issue.

You know that the companies have not coerced you into employee representation plans.

drew Mr. Green's fire appears elsewhere in this issue of *Automotive Industries*.

During the week, Michigan producing centers were relatively quiet, except for strikes in a few parts plants. The most important of these took place at the Bower Roller Bearing plant apparently for the purpose of establishing the closed shop. It is reported that only 40 men voted for the strike at a meeting attended by 80, but nevertheless the strike order caused a walkout of some 700 or 800 men. The case is now before the Detroit Labor Board.

It is believed in Detroit that the A. F. of L. would prefer not to precipitate a general strike, but would rather call out the workers in individual plants on the grounds that such a program would be more productive of results

due to competitive angles. This program is not regarded as practical, however, as it is believed that the strike, if called, will spread rather rapidly to some parts companies and particularly to the steel industry.

The vote taken this week at the General Motors Truck plant on the question "Are you in favor of a strike?" under the auspices of the works council resulted in 234 "yes" and 1100 "no," with 1,000 not voting. The A. F. of L. had asked members not to vote, so the election was not decisive as to the feeling of the majority of the workers.

Workers at the various Nash plants in Wisconsin on Wednesday rejected a settlement involving a 10 per cent increase. Responsible for the rejection was the insistence of the union on the closed shop, elimination of group bonus

Fights for Recovery

You well know that you have taken part voluntarily in setting up employee representation plans.

You know too that hours have been shortened voluntarily to an annual average of thirty-six hours per week, that wage rates have been increased more than 30 per cent within the past year and in many cases are higher than they were in 1929 at the peak of prosperity and that twice as many men are at work today as during the depression.

There is only one fundamental issue here, namely:

Whether the automobile industry is to be run by the American Federation of Labor or any other outside union;

Whether you have to get a union card in order to work in these plants;

Whether your job and your advancement in the industry will be based on merit;

Whether the employee representatives shall be ousted in favor of outside labor leaders who have interests to serve other than your interests.

If the strike comes, it won't be because you want to strike.

The strike threat comes from the American Federation of Labor and not from the automobile workers.

Let there be no misunderstanding as to the companies' attitude toward the automobile representation plans.

The automobile manufacturers intend to abide by the employee representation plans as they may be modified from time to time by the employees themselves.

And bear this in mind, the automobile industry is unquestionably leading the way back to prosperity. People are buying more automobiles than they have been for years.

This increased demand means more jobs at good wages—not only in the automobile industry but in thousands of other industries supplying materials and parts to the automobile manufacturers.

A strike at this time will not only work hardship on you and your families but will interfere with the recovery efforts of the President of the United States.

The automobile industry has reached its present state of high efficiency, low cost, with the consequent wide demand for its products, high wages and plentiful jobs without the help of the American Federation of Labor and without any serious labor trouble.

Unasked and unwanted, the American Federation of Labor is now trying to get control of this industry and destroy what we have taken years to build.

This industry does not intend to yield to such un-American and unpatriotic procedure.

National Automobile Chamber of Commerce

This was signed by thirty-two member companies and Fisher Body Division, General Motors Corp.

systems, and the introduction of the seniority system. A strike at the Thompson Products Co. plant in Cleveland, called for Wednesday, was postponed pending a hearing before the local labor board. A strike at the Motor Products plant in Detroit was also averted on Wednesday by wage increases in some departments and elimination of the group bonus in others.

Following the statements of W. S. Knudsen, General Motors, A. E. Barit, Hudson, at the National Labor Board hearing on March 15, events moved rapidly toward a crisis, with N.A.C.C. members presenting a united front. Although Mr. Knudsen spoke only for General Motors, he really stated the industry's position in the controversy.

Briefly the position which the industry assumed, is as follows:

1. So far as it can, it will see that no employee or group of employees will be coerced into being represented by any works council, labor union or outside representation, not of their own choosing.

2. The industry will bargain directly with properly accredited representatives of its employees.

3. The industry has no right to bargain with the National Labor Board on how its employees select their representatives and refuses to participate in any way in any Labor Board election.

4. The industry will not recognize A. F. of L. unions, nor enter into any contracts with them.

5. The industry will consider all charges of discrimination against union

members on their merits, and will remedy promptly any infractions of the code or the law.

Union leaders answered on March 16, with a resolution recommending a strike for 9 a.m., March 21, to be continued "until such time as the government enforces the law." The resolution condemned the attitude of the manufacturers, stating: "The United States Government has enacted certain laws which have been openly defied by these modern overlords," and appealed for public support. The resolution was supplemented by a statement by William Collins, Detroit leader for the Federation who asserted that the unions had organized in accordance with the law, and that General Motors and Hudson had refused to recognize and bargain collectively with the union representatives. He continued that the unions had put their case before the President and at his request had deferred action until the National Labor Board could hold a hearing, in the hope that that body would "force the . . . companies to conform to the law." He asserted that General Motors and Hudson had defied the Board by refusing to hold an election, by refusing recognition, and by refusing to enter into any contract. Concluding, Mr. Collins said that "If future events prove in any way to be a bar to the recovery program, the responsibility will rest squarely on the shoulders of those who have defied the government. . . ."

The scene of the controversy then shifted to Detroit and other motor manufacturing centers where, beginning Sunday, the unions voted to strike on March 21, in accordance with the recommendations of their leaders.

The manufacturers were again saddened with the responsibility for the strikes if they developed in a statement issued by Federation President Green on Sunday. He said in part: "The cause of the strike is directly traceable to the attempt of the automobile manufacturers to impose company unions upon their workers. . . . The workers . . . believed that Section 7(a) of the NIRA conferred upon them freedom of choice in self-organization and that it meant just what it said. . . . The automobile workers ask, first, that they be permitted to vote in a secret ballot upon the selection of representatives . . . and upon the question of what form of organization shall be the agency through which they shall negotiate with their employers, and second, that automobile workers who have been discharged, dismissed and discriminated against" because they are members of an A. F. of L. union, be returned to their jobs.

On the same day, Mr. Collins issued a statement in somewhat the same vein, but in which he said in addition: "If, after an election outside the plants and under the supervision of NRA, the automobile workmen vote in favor of company unions, or any other program of

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Labor Leaders Would Rule

THE Wagner Labor Disputes Bill gives the clearest picture yet available of the aspirations of labor leadership.

If it is enacted, it wouldn't make so much difference who lives in the White House because real political power will be situated at the headquarters of the American Federation of Labor.

If minorities such as the veterans' organizations numbering a couple of million at most, can influence national legislation so profoundly, is there any reason to doubt that the leaders of a minority of ten to twenty million union members would be omnipotent?

That union membership would attain such gigantic proportions if the Wagner Bill becomes law is no pipe dream. Under the relatively mild provisions of the Recovery Act, membership in the American Federation of Labor has doubled. With the blank check which the Wagner Bill would give to labor leadership, there is every reason to believe that the phenomenal rate of growth which the Federation has enjoyed in the last year would be greatly accelerated. And with this growth would come not only political power, but the closed shop with all it means in the way of restrictions that destroy efficiency and initiative.

The Wagner Bill places no restraints on and provides no regulation of labor leadership. In fact, if it detailed the things that labor leaders might not do with the same exactness it lists prohibitions on management, industry would find the Bill a lot easier to swallow. The whole tone of the Bill implies that any participation by employers in

employee affairs must be actuated by selfish and sinister motives, while on the other hand inferring that labor leaders are motivated only by pure altruism and hence no restraints need be placed on them to protect industry, the workers and the public. Maybe labor leaders are that altruistic, but there are recurring stories of racketeering in union affairs, not to mention the situation which union leadership created this week in the Detroit area.

In addition to legalizing the closed shop and in effect outlawing company unions, the Wagner Bill would

SECTION 4. Employees shall have the right to organize and join labor organizations, and to engage in concerted activities, either in labor organizations or otherwise, for the purposes of organizing and bargaining collectively through representatives of their own choosing or for other purposes of mutual aid or protection.

SECTION 5. It shall be an unfair labor practice for an employer, or anyone acting in his interest, directly or indirectly—

(1) To attempt, by interference, influence, restraint, favor, coercion, or lockout, or by any other means, to impair the right of employees guaranteed in section 4.

(2) To refuse to recognize and/or deal with representatives of his em-

"NO INDUSTRY, entirely union in character, has made substantial progress in this country, and the effect of the Wagner bill is to force closed shop unionism on all industry."

create a permanent National Labor Board with far-reaching powers over "unfair labor practices" similar to those vested in the Federal Trade Commission over "unfair trade practices." The Board or its agents could subpoena witnesses, call for records, hold elections under its own rules to determine representatives of employees, act as an arbitrator, issue "cease and desist" orders enforceable through the courts, etc. This hurried summary merely suggests the "wallop" the Labor Board would pack under Senator Wagner's bill. The unfair trade practices previously referred to are defined as follows:

employees, or to fail to exert every reasonable effort to make and maintain agreements with such representatives concerning wages, hours, and other conditions of employment.

(3) To initiate, participate in, supervise, or influence the formation, constitution, by laws, other governing rules, operations, policies, or elections of any labor organization.

(4) To contribute financial or other material support to any labor organization by compensating anyone for services performed in behalf of any labor organization, or by any other means whatsoever.

(5) To fail to notify employees in accordance with the provisions of section 304(b).

(6) To engage in any discriminatory practice as to wage or hour differentials, advancement, demotion, hire, tenure of employment, reinstatement, or any other condition of employment which encourages membership or non-membership in any labor organization: *Provided*, That where a contract or agreement of any kind is or shall be in force between an employer and a group of employees, the provisions of such contract or agreement regarding conditions of employment shall not, because of anything contained in this paragraph, compel an employer to observe similar conditions of employment in his relations with all his employees: *Provided further*, That nothing in this act shall preclude an employer and a labor

"IF MINORITIES, such as the veterans' organizations numbering a couple of million at most, can influence national legislation so profoundly, is there any reason to doubt that the leaders of a minority of ten to twenty million union members would be omnipotent?"

Passage of Wagner Bill Would Vest Vast Political and Economic Powers in the American Federation of Labor

organization from agreeing that a person seeking employment shall be required, as a condition of employment, to join such labor organization, if no attempt is made to influence such labor organization by any unfair labor practice, if such labor organization is composed of at least a majority of such employers' employees, and if the said agreement does not cover a period in excess of 1 year.

305(b) Any term of a contract or agreement of any kind which conflicts with the provisions of this act is hereby abrogated, and every employer who is a party to such contract or agreement shall immediately so notify his employees by appropriate action.

In a statement denouncing the bill, the National Automobile Chamber of Commerce says in part:

"The bill would in effect unionize every industrial worker in the country, regardless of his own wishes, and would set up a labor dictatorship with power and authority exceeding anything yet experienced in the United States and it would result in giving a labor union official virtual domination over American industrial life. Everybody, from the farmer with more than one man in his employ to the large manufacturer with thousands dependent upon him for their livelihood, might be subject to the whim of some irresponsible professional labor organizer.

"The bill would be inimical to the best interests of employees themselves, and fatal for employers. It would, if passed, dip heavily into the pocketbooks of the men and women of America.

"Higher prices, constant labor trouble, strikes and lockouts would be among the consequences of this act. The effect also would be to subject the

whole country to the dangers of a universal closed shop and a national strike involving the workers in every industry in the United States.

"In pointing out the evil inherent in the Wagner bill the National Automobile Chamber of Commerce joins the steel industry, which already is solidly opposed to the measure—and other leading industrial groups—in seeking to keep their industries out of the hands of organized minorities, which have interests to serve other than the interests of employees and employers.

"Even during the World War, when unions reached their greatest strength, union labor organizers were able to enlist in their voluntary membership drives less than 10 per cent of the gainfully employed workers in America. Such organizers are now trying to legislate men into unions, to set up so-called organized labor as the overlord of all American labor, in a position to extract dues from present non-members by coercive methods, and interested primarily in perpetuating the jobs of a labor bureaucracy.

"The Wagner bill reacts against the worker in that it would take away an incentive for individual advancement.

"One reason the automobile industry has been relatively free from labor disputes is because it has always paid higher wages than other major industries and because, wherever possible, promotions in an organization have been made from within the ranks. The men know that if they do their work well they will be moved up at the first opportunity. The seniority clause of the Wagner bill removes this incentive, and also destroys one of the cardinal principles upon which successful management is based.

"No industry, entirely union in character, has made substantial progress in



Wm. Green, president of the American Federation of Labor

this country, and the effect of the Wagner bill is to force closed-shop unionism on all industry.

"The right of the individual to work would be controlled by a union organizer, with attendant increased costs affecting not only the employees but the public and attendant risk of a national labor tie-up, the mere threat of which would be enough to exact any terms of settlement desired by labor leaders who may be responsible to no one but themselves.

"The automobile industry believes there should be placed upon the labor unions a responsibility and regulation equal to that already placed upon business. But today we have a tendency toward nationalization of business and industry under rigid control and an effort to organize labor on a nationwide scale with no control or responsibility whatsoever.

"National labor unions, without a semblance of regulation from any quarter, would, if they could organize the American workers, have an annual income of close to a billion dollars. It is fair to assume that the public, when it knows the facts, will demand for its protection the same measure of regulation applied to labor unions as is applied to business. The Wagner bill imposes additional regulations and penalties only upon employers, and none whatever upon the national labor organization.

"THE automobile industry believes there should be placed upon the labor unions a responsibility and regulation equal to that already placed on business."

AUTOMOBILE WORKERS!

Here Is Your Chance!

For many years men engaged in your industry have been the victims of the so-called "open shop" policy of the Employers' Association. Through the spy system they have kept you from organizing.

Through trick methods of pay, including the bonus system, piece work system, gang system, etc., the workers have been deceived as to their actual earnings. Some efforts have been made on the part of the workers to correct these conditions. Sometimes a degree of success was obtained, but in most cases failure was the result.

Lack of permanent organization has deprived the workers in the automobile industry of the proper facilities to cope with their situation.

There is now before the United States Congress a bill known as the National Industrial Recovery Act. This bill has passed the House of Representatives. It has the approval of the President. It is favorably recommended by a committee to the United States Senate and unquestionably will pass in its present form.

The bill provides that manufacturers engaged in the same industry shall have the right to get together for the purpose of agreeing on the price of their commodity, the amount of production and also to agree on wages, hours and working conditions of employees.

The act provides, as you will see by the sections printed on this handbill, that the employees of the industry have the right to organize into FREE TRADE UNIONS without any interference from the management.

The act further provides, the employees shall have the right of collective bargaining with the Government sitting in as the umpire. This gives you representation.

No employer shall be permitted to force an employee to join a company union.

This legislation is the most far-reaching ever introduced into the United States Congress. This law will strike the chains off the workers. If they grasp the opportunities set forth in this law, it will be the means of bringing to those employed in the automobile industry a standard of living commensurate with that of men and women employed in other trades that are organized.

Under this law, the boss is stopped from firing anybody for belonging to a union.

The law provides a \$500.00 fine, six months in jail, or both, for anyone who violates any of the rules or provisions of the act. In other words, if the boss fires you for joining the union, he goes to jail.

The following are some of the sections of the law as now proposed:

RECOVERY ACT TAKING THE CHAINS OFF OF LABOR

"Sec. 7. (a) Every code of fair competition, agreement, and license approved, prescribed, or issued under this title shall contain the following conditions: (1) That employees shall have the right to organize and bargain collectively through representatives of their own choosing, and shall be free from the interference, restraint, or coercion of employers of labor, or their agents, in the designation of such representatives or in self-organizations or in other concerted activities for the purpose of collective bargaining or other mutual aid or protection; (2) that no employee and no one seeking employment shall be required as a condition of employment to join any company union or to refrain from joining a labor organization of his own choosing; and (3) that employers shall comply with the maximum hours of labor, minimum rates of pay, and other working conditions, approved or prescribed by the President."

For years the workers in the automobile industry have waited for the American Federation of Labor to organize them.

For years the American Federation of Labor has waited for a favorable opportunity. This is your chance to form a labor union under the banner of the American Federation of Labor to deal with the employers over your conditions of employment.

The employers are preparing now to institute company unions to keep you from organizing a legitimate union. The employers will use every effort to circumvent your rights under this law.

In order to protect your interest, you must be prepared the minute the law passes and the automobile industry makes application to come under its provisions, you must present your demands for decent working conditions.

THERE WILL BE A

Meeting of Automobile Workers

at the

LABOR TEMPLE, 274 E. Vernor Highway

Monday Evening, June 19, at 8 o'clock, to

ORGANIZE A UNION

Come and bring other auto workers with you.

The law and all its provisions as it applies to your industry will be discussed at this meeting.



Back of this week's crisis lies continuous agitation by A. F. of L. leaders who were kindling fires of discontent among automotive workers even before the passage of the Recovery Act, as indicated by this provocative hand-bill, first reproduced by Automotive Industries on June 24 last. Now they disclaim responsibility. Can they get away with it?

JUST AMONG OURSELVES

The Inconceivable Happens Sometimes

IT seems inconceivable that the Wagner Industrial Disputes Bill will pass this or any other Congress—or that it could meet with Presidential approval if it did pass. Yet so many things, inconceivable to the mind of the average industrial executive of the Tempestuous Twenties have already come to pass, that even this bill which would revolutionize American industrial relationships cannot be shrugged into the subconscious of executive minds.

Putting absolute powers into the hands of the Labor Board and containing provisions which almost certainly would insure closed shop operation for all industry in this country, the Wagner bill is viewed by many as being primarily a decoy set up to draw the fire of opposition from some other proposals less drastic but still unpalatable to management tastes.

In any case, passage of this bill almost certainly would be the signal for beginning of the the longest, strongest legal battle ever waged between industry and government.

* * *

Events Circumscribe Car Makers' Powers

HOW different is the position of the vehicle manufacturer in relation to his economic en-

vironment today from what it was a decade ago!

Once the manufacturer held the balance of economic power over his dealers, his suppliers, his labor relationships and, of course, over management of his own business. Fairly exercised in many cases, wisely in more than a few, the power necessary to enforce final decision, in any case, lay usually in the hands of the manufacturer.

Today the vehicle maker is beset with attacks on his economic power from all sides. Codes and business cycles have combined to put him on the defensive in many realms where once he worked his will with little opposition. Before codes ever were thought of, competitive changes had given the dealer strength in bargaining with car factories which only a few retailers fully realized or capitalized. Retail and wholesale codes now curtail the sovereignty of the car maker in determination of distribution policies and methods; he has to defend himself against labor code interpretations which might ruin his business; other codes make possible the charging of higher prices by his suppliers.

The vehicle manufacturer is on the defensive today on many fronts. Skilled in offense and replete with the sort of courage which makes for success in constructive forward movement, he is not always deft in defense—apt in rebuttal. His mental pattern adapts itself more readily

to looking always forward, to quick perception of new vantage points for progress rather than to alertness in sensing the imminence of attack from an unsuspected quarter or in preparing plans of counter-attack.

Thought patterns change gradually; conditions rapidly, sometimes. Thus far the thinking of vehicle makers has exhibited remarkable flexibility, considering the suddenness of the need for change.

* * *

Enough Codes Now

SEEMS, at this writing, to be little likelihood of anything happening in regard to a code of fair practice between automobile dealers and manufacturers such as was proposed recently by S. M. Heimlich, a New Jersey dealer. No proposal has been made to the manufacturers, so far as we can find out, and our own opinion is that the industry has enough codes to worry about for the moment.

* * *

Magnificent Eccentrics

MOST reading we have done of late has pointed far from business paths, yet from so literary a context as that of Hervy Allen's "Israfel" crept out the following assertion which business might ponder with profit:

"Were it not for the magnificent eccentrics, society, like a community of insects, would crystallize forever in the ignoble efficiency of cast."

And while we're in the business of quoting, here's another from one, Spurgeon, which may interest the sales department:

"If a crooked stick is before us, you need not explain how crooked it is. Lay a straight one down by the side of it, and the work is well done. Preach the truth and error will stand abashed in its presence."—N.G.S.

Adequate Electrical Systems Would Be Worth the Price to Car Owners

Current Consumption Data

| Lamp No. * | Candle Power | Approx. Current (Amp.) |
|-----------------|--------------|------------------------------|
| T-63 | 3 | .59 |
| T-64 | 3 | .59 |
| T-81 | 6 | .96 |
| T-87 | 15 | 1.75 |
| T-1000 | 32-32 | 3.75 |
| T-1110 | 21-21 | 2.45 |
| T-1129 | 21 | 2.45 |
| T-1133 | 32 | 3.75 |
| T-1158 | 21-32 | 2.49 |
| Radio Equipment | | 5 to 10 |
| Heater Fan | | 4 to 5 |
| Defroster | | 8 to 10 |

*—This data from latest Tung-Sol price list.

Part One

Part two will appear in an early issue

markably concerted effort to meet the demand for adequate electric power.

A few 1934 car models feature larger batteries; in a number of instances larger generators; and in other cases generators of the same physical size but with increased capacity due to fan ventilation. But, what is most important, some of the jobs are provided with voltage or current regulators designed to keep the electrical system somewhere near par while at the same time protecting the battery from the equally ruinous effects of overcharging or undercharging.

Unfortunately only a few influential officials have appreciated the close, in fact intimate, relation between the trend to streamlining which is synonymous with higher vehicle speeds, and better road illumination; also the comfort factor as exemplified by car interior, instrumentation, etc., in its relation to good lighting and the ability to handle attachments such as radio, car heaters, defrosters, etc.

What has been done on many 1934 offerings is the biggest step toward the ideal for which the electrical engineers have been striving for these many years. If the trend persists, and persist it will if given encouragement by the sales department, then the cars worthy of public acceptance will have generators with sufficient capacity to handle all electrical loads, and with the battery and lamps protected by some suitable form of regulation of charging rate.

Electrical equipment manufacturers have made tremendous strides in the design of their generators as will be evident from the characteristic curves which will be described in Part 2 of this study. In addition to voltage or current regulators for controlling output, the generator

HERE is something that perhaps can be dramatized and sold to the public in the same fashion as knees and streamlining—a modern car with sufficient electrical capacity to handle even bigger lighting systems, battery always ready for a quick, snappy start, and with plenty in reserve power for radio and other wanted electrical accessories. Such an electrical system, made fool-proof by generator regulation, would answer the many prayers which owners say on cold and frosty mornings, and possibly cause those inclined to profanity to mend their ways.

Electrical engineers always have appreciated the urgent need for improvement in the electrical system of the passenger car. But improvements mean added expense and no

one seemed to think the public would be interested enough to care. Moreover, it is only very recently that electrical equipment manufacturers have really produced the answer at a price.

So car users have had to be content with what they have been getting, accepting such things as unsatisfactory battery service (always blamed on the battery), occasional generator trouble, and always something to worry about during long, hard-starting winter months.

Then came auto radio. And in 1933 the radio manufacturers installed upward of 800,000 sets in cars many of which could barely handle the lighting load. Partly in recognition of the urgency of the situation, 1934 models show a re-

by Joseph Geschelin
Engineering Editor, Automotive Industries

if

Car Makers Would Pay the Price to Get Them

characteristics have been materially improved, particularly as to output at higher speeds.

Naturally it's going to cost more for such electrical systems, but the public should be willing to pay more if it's told what it is getting for the money.

Let's take a little time to look the matter over. Just for convenience our peek into the situation will take the following form:

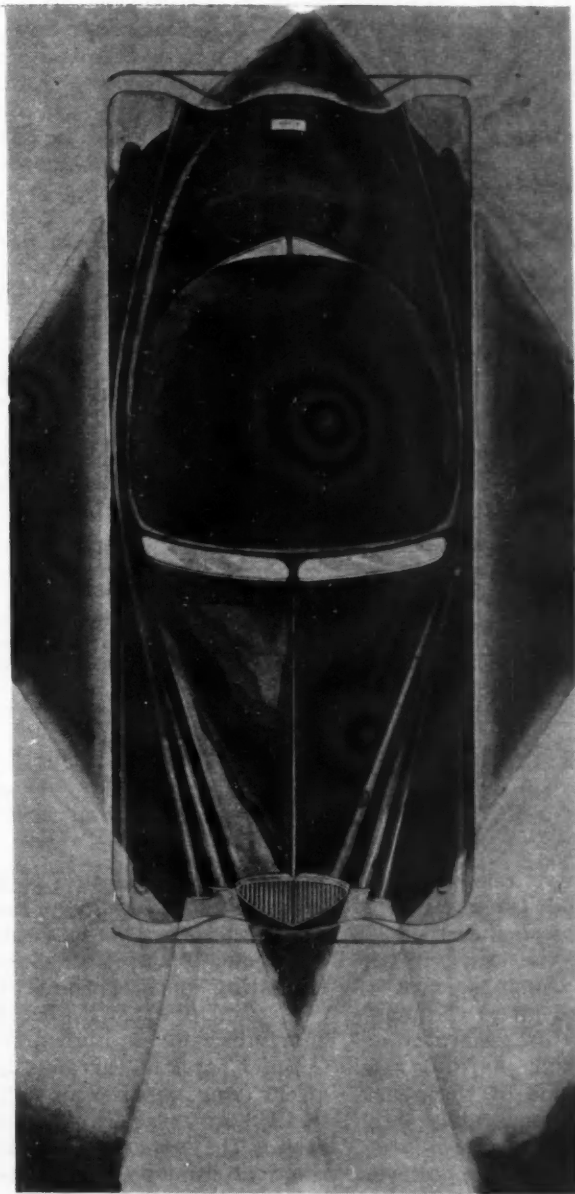
1. What we have had.
2. What we find in 1934.
3. What's the answer.

The first two points are to be covered in this installment, the third will be reserved for the second part to be published immediately.

POINT 1. Electrical loads on the automobile starting and lighting system have been growing with great rapidity during the past few years, due, as it might be surmised, to improvements in the lighting system such as the shift to 32 cp. headlamps, an increasing number of lamps in the circuit, and the use of electrical attachments installed either at the factory or more usually by the owner.

Getting down to actual figures, the growth has been quite amazing, the loads having been increased by 50 per cent or more on certain makes as illustrated by several examples taken from the "Standard Auto-Electrician's Manual" for 1933.

Hudson for 1926 had a "running load" consisting of two headlamps, one rear lamp, one dash light, totaling about 6.66 amp. In 1933, the car had two head lamps, two dash lights, two tail lamps, totaling about 9.80 amp. or almost 50 per cent greater than the load in 1926. The



The Well-Lighted Car

Courtesy General Electric Co.

Table 1—Generator-Data

| Make | Model | Running Lamp Load (Amps.) | Make | Type | Charging Voltage | Control Current | Charging Rate (Amps.) | | Car Speed for Max. Charging Rate-M.P.H. |
|--------------|---------|---------------------------|---------|-----------|------------------|-----------------|-------------------------------|-------------------------------|-----------------------------------------|
| | | | | | | | Hot | Cold | |
| Auburn | .... | 9.6 | A-L:D-R | 3-Br. V. | .... | .... | 16 | 20 | .... |
| Austin | .... | 6.0 | A-L | 3-Br. | .... | .... | 10 | 14 | .... |
| Buick | .... | 11.5 | D-R | .... | .... | .... | 13 | 20 | 30 |
| Cadillac | V-8 | 10.3 | D-R | Shunt, V. | .... | Yes | 15.5 Lts. on 10.0 Lts. off | 20.5 Lts. on 15.0 Lts. off | 17 & above |
| Cadillac | V-12 | 10.3 | D-R | Shunt, V. | .... | Yes | 15.5 Lts. on 10.0 Lts. off | 20.5 Lts. on 15.0 Lts. off | 17 & above |
| Chevrolet | Master | 9.1 | D-R | 3-Br., S. | .... | .... | 15 | 19 | 30 |
| Chevrolet | Std. | 6.7 | D-R | 3-Br. | .... | .... | 12 | 17 | 25 |
| Chrysler | 6; Imp. | 11.5 | D-R | 3-Br. | Yes | .... | 14.5 | 20 | 32 |
| Chrysler | 8 | 10.3 | D-R | 3-Br. | Yes | .... | 14.5 | 20 | 32 |
| Continental | .... | 6.1 | A-L | 3-Br. | .... | .... | 12 | 16-17 | .... |
| Cunningham | .... | 6.1 | .... | .... | .... | .... | .... | .... | .... |
| DeSoto | .... | 10.9 | D-R | .... | Yes | .... | 14.5 | 20 | 30 |
| Dodge | .... | 10.9 | D-R | 3-Br. | Yes | .... | 14 | 22 | 28 |
| Duesenberg | .... | 6.7 | D-R | .... | .... | .... | 13 | 21 | 25 |
| Ford | .... | 9.5 | Own | 3-Br. | .... | .... | .... | .... | .... |
| Franklin | 6 | 6.7 | D-R | .... | .... | .... | 13 | 21 | 24 |
| Franklin | 12 | 6.7 | D-R | .... | .... | .... | 15 | 23 | 25 |
| Graham | 6 | 10.4 | D-R | 3-Br. | .... | .... | 15 | 19 | 30 |
| Graham | 8 | 10.4 | D-R | 3-Br. | .... | .... | 15 | 21 | 30 |
| Hudson | .... | 9.6 | A-L | 3-Br. V. | Yes | .... | 17 | 22 | 28.0 |
| Hupmobile | .... | 10.3 | A-L | 3-Br. V. | Yes on 8 | .... | 17 | 20 | .... |
| LaFayette | .... | 9.1 | A-L | 3-Br. V. | .... | .... | 16 | 18 | .... |
| LaSalle | .... | 10.3 | D-R | Shunt, V. | .... | Yes | 16.5 Lts. on 12 Lts. off | 20 Lts. on 14 Lts. off | 17 & above |
| Lincoln | .... | 9.6 | A-L | .... | .... | .... | .... | .... | .... |
| Marmon | 16 | 11.5 | D-R | .... | .... | .... | 12 | 20 | 26 |
| Nash | .... | 9.6 | A-L | 3-Br. V. | .... | .... | 16 | 20 | .... |
| Oldsmobile | 6 | 10.4 | D-R | 3-Br., S. | .... | .... | 15 | 19 | 34 |
| Oldsmobile | 8 | 10.4 | D-R | 3-Br., S. | .... | .... | 15 | 19 | 34 |
| Packard | .... | 15.2 | O-D | .... | .... | .... | .... | .... | .... |
| Pierce-Arrow | .... | 11.0 | D-R | .... | .... | .... | 13 | 21 | 26 |
| Plymouth | DeLuxe | 10.3 | D-R | 3-Br. | Yes | .... | 14 | 22 | 28 |
| Plymouth | Std. | 8.2 | D-R | 3-Br. | .... | .... | 12 | 16 | 20 |
| Pontiac | .... | 9.1 | D-R | 3-Br. | .... | .... | 15 | 19 | 32 |
| Reo | .... | 9.1 | D-R | .... | .... | .... | 12 | 21 | 30 |
| Studebaker | Dict. | 10.3 | A-L | 3-Br. V. | .... | .... | 12.5-13.5 | 16.5 | 18.0 |
| Studebaker | Comm. | 10.3 | D-R | .... | .... | .... | 12 | 20 | 18.5 |
| Studebaker | Pres. | 10.3 | D-R | .... | .... | .... | 12 | 20 | 19.4 |
| Stutz | .... | 13.1 | D-R | .... | .... | .... | 12 | 23 | 25 |
| Terraplane | .... | 9.1 | A-L | 3-Br. V. | Yes | .... | 17 | 22 | 28 |
| Willys | 77 | 6.1 | A-L | .... | .... | .... | 12 | 16 | .... |

¹ Prepared by General Electric Co.

Abbreviations:

A-L—Auto-Lite.
D-R—Delco-Remy.
O-D—Owen-Dyneto.

3-Br.—Conventional third brush.
Shunt, V.—Ventilated Shunt mach.
3-Br., V.—Ventilated third brush.

3-Br., S.—Conventional third brush, switch resistance control.

generator capacity remained the same—17 amp. cold, 15 amp. hot. If a radio set were installed on the 1933 or earlier models, the load with the set in operation would be about 15 to 17 amp. or well up to the maximum capacity of the generator delivering its maximum charging rate, and probably outside of the generator capacity at moderately high road speeds.

It is important to note, however, that Hudson in 1933 installed about 5000 generators of larger capacity where radio installation was specified at the factory.

Chevrolet in 1926 had a running load of about 6.18 amp. while in 1933

it rose only a bit to 7.16 amp. because of retaining 21 cp. headlamps. The 1926 generator was rated at 15 amp. cold, 13 amp. hot, while in 1933 the rating was stepped up to 17 amp. cold, 15 amp. hot, with better output characteristics at higher speeds.

Buick for 1926 carried a lamp load of 6.38 amp. which went to 9.80 amp. in 1933, an increase of about 50 per cent. The generator in 1926 was rated at 15 amp. cold, 12-14 amp. hot. For 1933 the generator was rated at 22 amp. cold, 15.5 amp. hot.

Olds for 1926 had a lamp load of 6.18 amp. and went to 10.34 amp. in 1933. The generator rating, hot, is about 12 amp. for both models, ex-

cept that the later job had better output characteristics at higher speeds.

Bear in mind that the generator ratings quoted above represent the maximum charging rate at fairly low vehicle speeds as we rate them today. At speeds around 40 m.p.h., night driving, the batteries on such vehicles are subjected to continuous discharge, resulting in low voltage and consequently poor lights.

The tribulations of car owners and battery service stations have been legion during the past few years. That complaints have not been overwhelming during this trying period has been due entirely to

the fact that only a certain cross-section of the car users have done considerable night driving or night driving at high speed.

It's a matter of history that after the car owner has had repeated difficulty with his battery, because of excessive current drainage, and after several rechargings, the service station has been forced to adjust the third brush to about its highest setting in order to get a better charging rate. And shortly thereafter the generator manufacturer begins to hear about generator failures—throwing solder particularly.

Isn't it reasonable to assume at least that buyers who have experienced such trouble will listen to the story of adequate electrical equipment?

The foregoing applies to most of the older cars on the road today; also to many 1933 jobs, and to some cars of more recent vintage. The saving grace in the situation is that the great volume of car radio business has made it both attractive and profitable for equipment makers to place on the market replacement generators of larger capacity and battery chargers for the home garage. Many good merchandisers expect that such devices will sell in large volume this year.

Of course, if it were possible to control the usage of the radio set and limit it to operation during day-

light hours while the vehicle is in motion, there would be little to think about. But such restriction will neither promote the installation of auto radio sets, nor is it reasonable. So the only way out is to recommend the special equipment which is needed when the radio is installed on an old car or a new car which falls short of the needed electrical capacity.

Incidentally, a larger replacement generator alone is not always the answer, as often it will cause frequent lamp burn-outs unless some form of regulator to protect the battery from destructive overcharging is provided.

Point 2 takes us to where we are in 1934. With the advent of car radio, factory-installed in a few cases, we find the new models of a number of makers meeting the situation, with almost revolutionary changes in their electrical systems. Briefly, the changes comprise the use of either larger generators or generators of the same physical size stepped up in output from 25 to 40 per cent by virtue of fan ventilation; the boosting of vehicle speed to higher limits before attaining the maximum generator charging rate; adoption of voltage regulation as on Auto-Lite and Delco-Remy equipment; and the use of current controlled, "lamp load" generators developed by Delco-Remy.

But some models still retain the

conventional generator equipment without any increase in output, thus remaining in the category of the old. How does the 1934 electrical system measure up to its job? For the answer analyze the figures in Table 1.

Chevrolet, Chrysler, Dodge, Hudson, Terraplane, Olds 6 and 8, Pontiac and Cadillac V-8, for example, have increased the vehicle speed at which the maximum generator charging rate is attained.

On the Cadillac, with a running load of 10.3 amp. without any electrical accessories on the line, the generator output, hot with lights on, is 15.5 amp., this rate being maintained at about even keel without tapering off.

Hudson has prepared for radio equipment. With a running load of only 9.6 amp. the generator capacity is 17 amp. hot; and the same goes for the Terraplane.

While Studebaker's running load is close to the maximum generator capacity on cars in regular production, they provide special high-output generators where radio is specified.

Obviously more improvement is the order of the day, provided the electrical experts are given the proper support and a little more money. From guarded comment here and there one can assume that there is much activity under the surface and much hope of further activity in the near future.



John L. Lewis

Press reports credit John L. Lewis, president of the United Mine Workers of America, with saying that he

All Automotive Manufacturers Have Got So Far under the Recovery Act Is TROUBLE

understood in return for suspension of the anti-trust laws, industry would recognize the right of employees to organize, but he was deeply grieved because of the bad faith evidenced in the attitude of major employers. He is reported to have singled out the steel and automotive industries particularly for criticism of their labor attitude, saying that they were willing to take all the benefits of the NRA but still deny the equality of bargaining power to labor.

Mr. Lewis should know that the automobile manufacturers asked for and received no suspension of the anti-trust laws. The approved code of the automotive parts and equipment code contains a prohibition of sales below cost which does represent a suspension of the anti-trust laws. But it hasn't meant

a thing yet since it must be implemented by supplementary product group codes of fair trade practices, none of which have been approved as yet.

So to date, the provision for suspending the anti-trust laws in the Recovery Act has meant exactly nothing to automotive manufacturers. On the other hand, the labor sections of the codes have resulted in substantially higher wage costs. In return for paying more wages, manufacturers in an industry which has been famous for harmonious labor relations, get only a wave of labor unrest, set in motion by leaders who appear to be more interested in building an organization of workers and in the power which such organizations would give them, than in national recovery.

Buda Offers Two M.A.N. Type

ANNOUNCEMENT is made by the Buda Company of Harvey, Ill., of a line of two heavy-duty, six-cylinder, automotive Diesel engines built under license from the German M.A.N. Company. The engines have bores of 3 13/16 and 4 in. respectively, and a common stroke of 5 1/2 in., making the displacements 377 and 415 cu. in. Both are governed at 2000 r.p.m., at which speed they are said to develop in excess of 80 and 90 hp. respectively.

The engines are of the four-cycle, full-Diesel, solid-injection type, using Bosch fuel-injection systems. In accordance with M.A.N. practice, an air-storage chamber is incorpo-

rated in the cylinder design. Each of these chambers can be closed off by a plunger-type rotary valve, for easy starting when the engine is cold, by means of a single lever for all six valves. When the air-storage chambers are thus closed off the compression ratio is roughly 17 to 1.

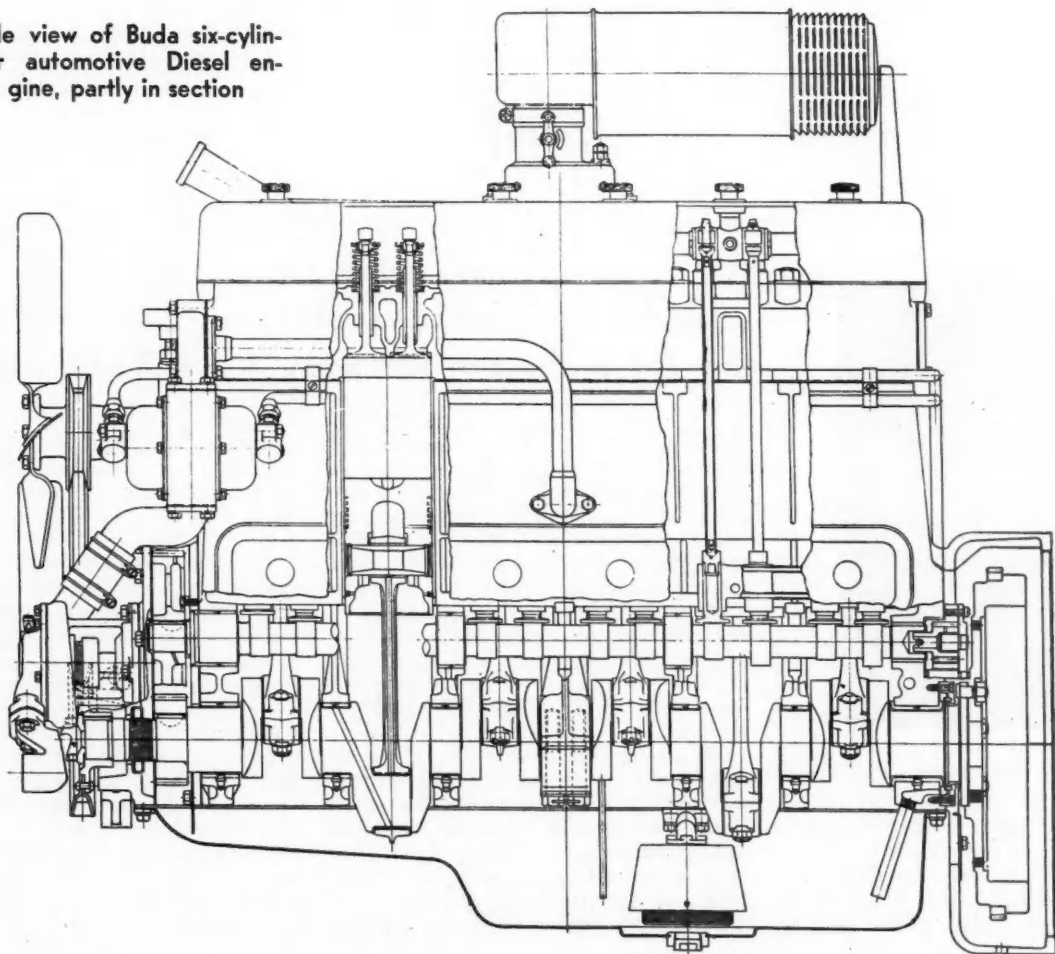
The valves are opened again when the engine has reached its normal operating temperature—that is, a temperature of 130 deg. Fahr. or better—and the compression ratio is then roughly 13 to 1.

While indicator cards of these engines are not available for publication, it may be mentioned that they show an unusually low maxi-

mum rate of pressure rise, which accounts for their relative smoothness of operation and the fact that fairly light weight could be achieved without resort to light-metal engine castings. The only major aluminum alloy part is the cylinder head cover inclosing the overhead air intake and exhaust valves.

The object of operating on a relatively low compression ratio, according to Buda engineers, is to obtain the maximum air supply in the combustion chamber, achieving an increase in turbulence for more effective combustion, thereby increasing the horsepower output and combustion efficiency, as shown by

Side view of Buda six-cylinder automotive Diesel engine, partly in section



Diesels with Bosch Injection

a reduction in the amount of smoke in the exhaust gas.

Specific fuel consumption is a minimum between 1200 and 1600 r.p.m. The maximum B.M.E.P. valves are obtained within the same speed range, although the torque curve is relatively flat from 600 to 1800 r.p.m. A lower specific fuel consumption and a higher torque are obtained with the lower compression ratio because of the greater permissible air content of the combustion chamber. The engines do not carry air compressors for supercharging.

Simplicity is the keynote of the design, but in the effort to achieve it, serviceability was not disregard-

ed. The engines are of clean-cut appearance, especially from the generator side. In size they approximate closely to gasoline engines of the same output at the same operating speed.

Aside from the fuel injection mechanism, the powerplants do not depart widely from accepted heavy-duty automotive design practice. Crankcase and cylinder block are cast integral. Blocks are fitted with replaceable dry type steel sleeves clamped in place by the cyl-

inder head. Oil leads are drilled passages.

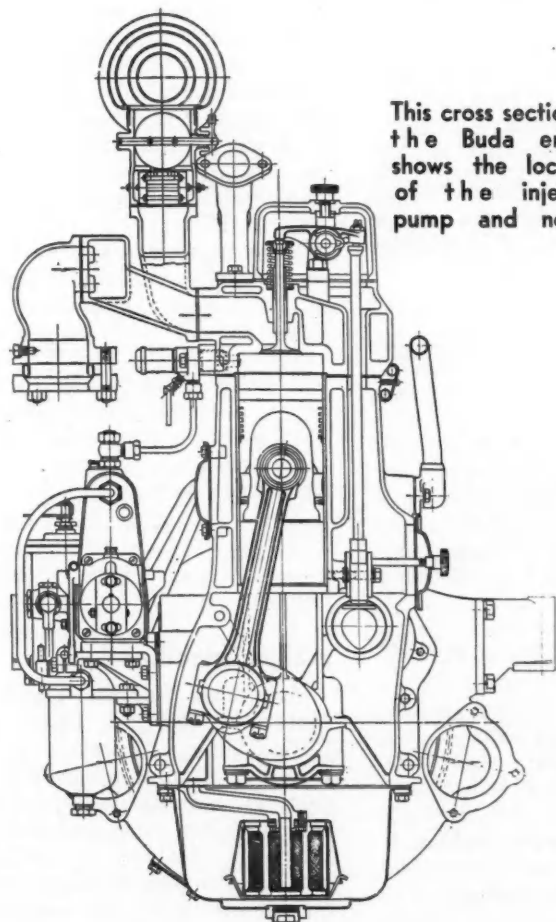
Main bearings are of the steel-backed precision interchangeable type, individually replaceable without disturbing the crankshaft. There are seven of these, with a nominal diameter of 3 in. Crankshafts are rigid drop-forgings with overlapping main bearing and crankpin journals.

Connecting rods are rifle-drilled, for pressure lubrication to the full-floating piston pins. Pistons are of aluminum alloy, the piston head design incorporating a transverse, specially-shaped trough to increase turbulence. There are six rings per piston, the upper two being plain "firing" rings; the next two, compression rings, and the lower two, oil-control rings.

Connecting rod lower-end bearings are similar to the main bearings, being also interchangeable. Moreover, upper and lower halves of these bearings are interchangeable and assembled without dowels or shims.

Intake as well as exhaust valves are of silchrome steel, the former being $1\frac{3}{4}$ in., and the latter $1\frac{1}{2}$ in. in diameter. They are operated through push rods and rocker arms from the camshaft in the crankcase. Tappet adjustment can be made with the engine running. Valve-seat inserts are provided for the exhaust valves. Valve grinding normally should be required only after 1500 hours of service, according to the maker. Valve springs can be replaced without removing cylinder heads. Pistons and connecting rods are removed from the top of the block.

Camshaft drive is through cast molybdenum alloy iron gears with helical teeth on the crankshaft and camshaft. The camshaft gear in turn drives the fuel pump and generator shaft—the former through an idler. Camshafts run in bronze bushings line-reamed in the crankcase. The oil pump is driven off the



This cross section of the Buda engine shows the location of the injection pump and nozzles

rear end of the camshaft through a pin-and-fork type of coupling.

Incorporated in the cooling system is a Harrison oil temperature regulator. Lubrication is of the full pressure type throughout, including the rocker arm shaft and governor. Fuel pumps, etc., are, of course, lubricated by the fuel oil itself. The gear-type oil pump fits in a recess of the flywheel housing. An oil-pressure-relief valve is provided. Also provided is an oil cleaner of the Auto-Klean type, which can be cleaned by turning a handle. The filter element consists of thin metal discs and spacers.

Impeller type pumps for water circulation are mounted on the timing gear cover, and are driven by the camshaft gear. From the pump, water is forced through the oil temperature regulator, where it divides, part going to a distribution gallery on the cylinder head, the remainder going into the block. Cooling fans are mounted on anti-friction bearings.

The Bosch fuel system is too well

known to require description here. Fuel injection nozzles are of the closed pintle type and normally should not require adjustment. Control of the amount of fuel injected is through a variable cut-off on the injection plungers, the stroke remaining constant. The Pierce governor regulates the amount of fuel directly, the hand "throttle" being connected to the governor.

A variable timing device, which regulates the start of injection, is provided, but adjustment of this mechanism is not recommended subsequent to shipment from the factory. There is in the system also a Bosch fuel filter, while the air intake is provided with a combined intake silencer and air cleaner of the standard automotive type.

The fuel transfer pump, which delivers the fuel oil to the injection pump, is mounted on the side of the latter. It is of the plunger type.

Electrical units are of Leece-Neville manufacture, and of the 24-volt type. Voltage regulation is provided for the generator.

that the substantially horizontal discharge of the air cell creates a certain amount of turbulence in the combustion chamber, which assures clean combustion up to maximum load.

Two engine models have been brought out embodying this new form of combustion chamber, both of the six-cylinder type. Both have a bore of 4.13 in., while the strokes are 5.12 and 5.51 in. respectively, making the displacements 408 and 445 cu. in. respectively. The engines are rated at 70 and 80-90 hp., at 1800 r.p.m.

Both engines have all of the cylinders cast in a single block with the crankcase. Cylinder heads are divided, but all of them are surmounted by a single valve cover. The crankshaft, which is supported in seven main bearings, is forged of chrome-molybdenum steel and has its bearings surface hardened by a special process. Die-cast, light-metal pistons and nickel-steel connecting rods with I-section shanks are used.

A Bosch 12-volt, 130-watt generator supplies current to two batteries of 75-ampere-hours capacity each. By connecting these batteries in series the starter can be operated at 24 volts, which reduces the losses in the line. The 24-volt Bosch starter has a rating of 4 hp. Starting aids, such as glow plugs, are not required.

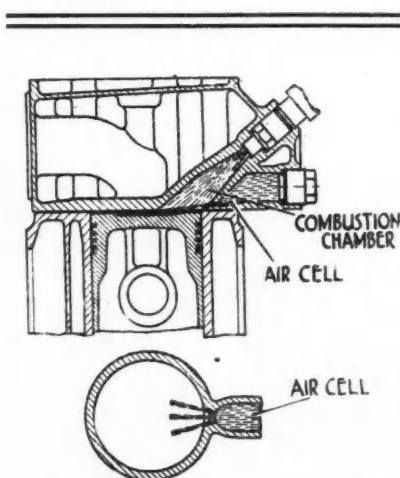
A compression ratio of 15 to 1 is used in these engines, and the compression pressure ranges from 425 to 455 lb. per sq. in., while the maximum pressure of combustion ranges between 710 and 780 lb. per sq. in. The brake m.e.p. ranges between 80 and 85 lb. per sq. in. The maximum torque is 217 lb.-ft. for the smaller and 246 lb.-ft. for the larger engine. The engines weigh 1200 lb. each, dry, which gives specific weights of 17 and 15 lb. per hp. respectively.

M. A. N. Diesels Now Have "Air Cell" in Cylinder Head

FOR some time the M.A.N. Co. of Nuremberg and Augsburg, Germany, has been manufacturing automotive Diesel engines based on the so-called air-cell principle. In the earlier designs of this type the air cell was in the piston, but in the latest design it is formed in the cylinder head to one side.

As may be seen from the sectional drawing reproduced herewith, the piston comes close up to the cylinder head at the end of the compression stroke, and the combustion chamber is in the cylinder head, being of substantially conical form and inclined to the cylinder axis at an angle of about 60 deg. The injection valve is located at the top of this combustion chamber, and the form of the latter is such as to assure that the whole of the air in it will be well penetrated by the fuel spray. One reason for locating the combustion chamber toward one side of the cylinder is that it permits of larger valves, as required for high-speed operation. It will be seen that the air cell is located to one side of the combustion chamber. It discharges

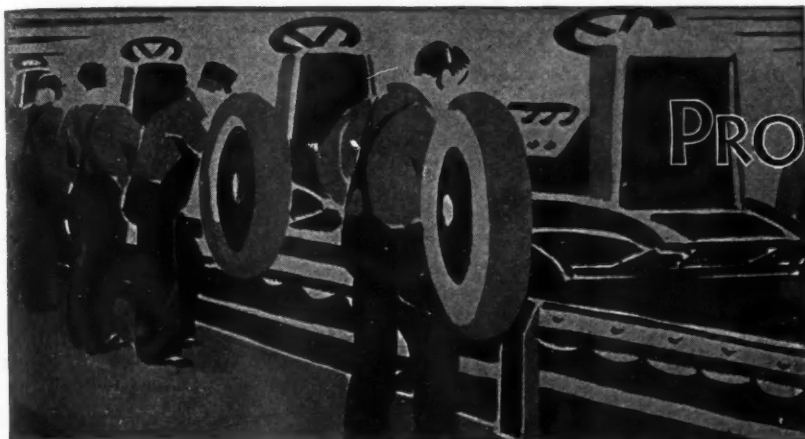
through three orifices, the air escaping from these orifices, mingling with the rich mixture in the combustion chamber. It is claimed



Arrangement of combustion chamber and air cell in new M.A.N. Diesel engine

ASTM Specifications

American Society for Testing Materials; 260 So. Broad Street, Philadelphia: Tentative specifications for aluminum-base alloys and castings; Tentative specifications for aluminum sheet and plate; Tentative specifications for carbon-steel castings for industrial, railroad and marine use; Tentative specifications for alloy-steel castings for structural purposes.



PRODUCTION LINES

Excuse, Please

Thank you, Mr. Montgomery, for pointing out a correction to our paper on external broaching which was published in the SAE Journal for February. The cutting fluid used in heavy broaching operations, particularly where good surface finish is desired, is a sulfurized material not sulphonated, as was stated. As is well known, the sulfurized materials have been used for a number of years. Where fine finish is wanted the cutting fluid also contains lard oil or is compounded with a sulfurized base.

Fan Power

At the radiator design session in Detroit, Harte Cook told the folks a thing or two about correct radiator and fan design for maximum economy. They have a way of working out the design on heavy-duty installations so that the fan takes less than 1 per cent of engine power.

Streamlined Core

Both F. M. Young and Saunders exploded the streamline form theory so far as its application to radiator cores is concerned. Wind-tunnel tests of radiator cores show conclusively that the ordinary round tube properly disposed is the most efficient form.

Real Study

It was only after hearing F. M. Young on radiator design that we realized how much scientific research there is in his industry. For instance, all design calculations are checked by subjecting a section of the core, one foot square, to a wind tunnel test. Later the entire core is tested in a big wind tunnel to see whether the results agree.

Oil Cooling

Several experts at the Annual Meeting expressed the idea that the most efficient kind of oil cooler is one that's water cooled. For big Diesel installations they seem to prefer an oil-cooling section in the main radiator core.

Copper Does It

About 800,000 pounds of copper were used by the State of Illinois in 1933 on a new type of concrete highway joint employing copper strip as the protecting element. Known as the Ace joint, it forms the protective covering for the longitudinal and transverse joints. The joint is said to last for the life of the road thus safeguarding the taxpayers' money.

For Service

Understand that Campbell, Wyant & Cannon Foundry has just added a fourth Lectromelt to their electrical furnace equipment. The new unit will operate with a 3 to 5 ton hearth capacity mainly on the duplexing of cupola iron for alloy iron crankshafts and camshafts. Duplexing operations superheat and make the bath uniform and clean. All of which is vital to the character of high strength alloys.

Below Cost

"Manufacturing Costs and Prices under the NRA" by William D. Ennis is an interesting discussion of "what is selling below cost." You'll find it in Mechanical Engineering for March. Prof. Ennis poses the question: "It is worth discussion, therefore, whether the best type of stipulation in a code should not follow the lines of the retail code, merely forbidding selling at less than the (individual)

out-of-pocket costs; whether codes should permit selling surplus products, which cannot otherwise be sold, down to this level. Does this involve 'destructive' price cutting? Is such class pricing to be regarded as exceptional and of an emergency nature, or is it worth consideration as a permanent and fundamental policy?"

E Merito

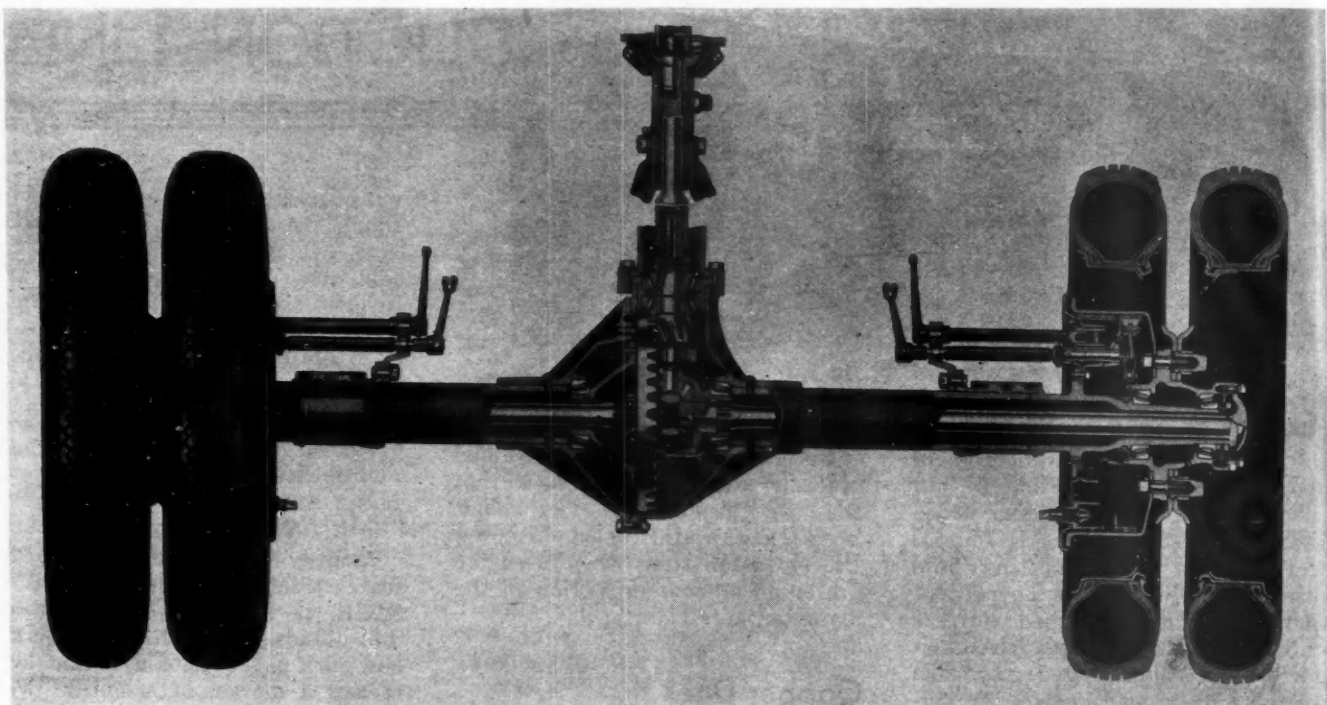
Mougey of General Motors Research treated Philadelphia Section S.A.E. to a paper on lubrication that stands out as the criterion of how such papers should be handled. It was a marvel of scientific precision and yet so clearly and simply explained as to be within the ready comprehension of everyone in the audience. Too frequently scientific papers are written for scientific men only. However if the Society and other interested people are to get the maximum benefit out of research work, the results should be presented in a form that's readily grasped by the rank and file, many of whom influence the success or failure of the results. Mougey can certainly sell the idea.

At Last

We may have missed the mark but we believe that Mougey in his informal paper on winter oils is the first man of prominence in recent years to boldly intimate that the battery is not the only cause for starting troubles in winter. He proved that even in sub-zero temperatures if the crankcase oil is of sufficiently low viscosity to flow freely, the engine will start. If the oil is viscous, friction is just too great to overcome within the limits of the starting system, and you can drain the battery dry without a start. But don't blame it all on the battery.—J. G.

MANUFACTURING
MANAGEMENT
METALLURGY

Full-Floating Axle Features New Ford Trucks



Features of the new Ford line of trucks include a full-floating rear axle with wider teeth gears, new differential bearings of the same size but of larger load capacity, ring gear centered between the bearings, axle housing ribbed for increased rigidity, heavier housings under the

spring seats and integral driving flanges on the shafts. The eight-cylinder engine now has dual manifolding and is fitted with a new cast iron cylinder head with 5.34 ratio. The horsepower output is 80 to 85. Connecting rod bearings are high leaded bronze on steel instead of bab-

bitt. Crankshafts are of the new cast alloy type. Brake drums are of high carbon steel. Body and chassis parts are finished in the new "Glyptal" enamel.

The commercial line, which follows passenger car practice, may now be had with a 3.54 rear axle.

Labor Controversy Reaches Crisis

(Continued from page 359)

representation, the American Federation of Labor will bow its way out of the picture."

Mr. Green's statement drew a broadside in return from the N.A.C.C., in which the manufacturers said that the issue was not what Mr. Green said it was. "The manufacturers have not coerced their employees into participation in the employees' representation plan. There is only one fundamental issue; namely, whether the automobile industry is to be run by the American Federation of Labor."

After reasserting that the industry would not recognize the A. F. of L. as such nor enter into any contracts with it, and emphasizing that the manufacturers were complying with the law, the N.A.C.C. reply said: "One outstanding reason for this strike order is the ef-

fort of professional labor leaders to get control over the automobile workers by force, by coercion, by intimidation of employees and their families by open violence and threats of strike. For many years, the American Federation of Labor has sought to organize the automobile plants and the workers themselves refused to recognize their leadership. . . . The N.I.R.A. does not say that the American Federation of Labor shall be the spokesmen for all of the employees, but the labor leaders have assumed that this act makes them the spokesmen for all American labor. . . . The American Federation of Labor seeks to make a union card, not merit, the sole condition of employment. . . ."

Mr. Green came back with a denial that the A. F. of L. "could not, nor would it, attempt to run the automobile

industry. The real issue is: shall the automobile workers be permitted to organize without coercion and intimidation from the automobile manufacturers and shall they be permitted to be represented in collective bargaining proceedings with the management by representatives of their own choosing." Mr. Green also denied the N.A.C.C. charge that, if a strike occurred, A. F. of L. attempts to impose itself on automobile workers would be the cause, at the same time reiterating that the manufacturers would be to blame.

Meanwhile the N.A.C.C. Directors assembled in New York on Monday, March 19, to consider proposals made by General Johnson to avoid a strike. General Johnson with Edward F. McGrady, assistant secretary of Labor and NRA Labor advisor, was near at

hand at the Waldorf and met with manufacturer representatives a number of times. What his proposals were, was not revealed but it is understood that he proposed a truce pending the creation of an impartial board to determine the issues at stake and to investigate charges of discrimination. What happened at the N.A.C.C. meeting has not been revealed, but it continued until Tuesday afternoon when President Roosevelt intervened with an invitation to both industrial and labor leaders to a parley in Washington on Thursday, March 22. A committee of N.A.C.C. directors left for Washington, Tuesday night, and went into session with the President, Wednesday afternoon.

In announcing this move, the N.A.C.C. fired another shot at the A. F. of L. leaders, as follows:

Mr. Green and Mr. Collins of the

American Federation of Labor have admitted that the strike is not for hours and wages and said that they have called the strike because of the charges which they make that the manufacturers have not complied with the law. The manufacturers assert that they have complied with the law in

But the Silverites May Object

Transportation engineers, says an editorial writer of snappy sayings for the New York Times, believe the new streamline industry will expedite national recovery. From now on every business cloud will be provided with a streamlining.

letter and spirit and that Mr. Green is using his official position in NRA and on the National Labor Board to foment strike in the hope the men will believe the government is behind the American Federation of Labor in its efforts to organize them.

At the same time he invited the manufacturers to confer with him, the President wired Mr. Collins requesting that strike action be deferred until after conference with him. The President's appeal was supplemented by Mr. Green in a telegram urging acceptance. On Tuesday evening, union leaders met in Pontiac and in Cleveland, and voted to defer the strike in accordance with the President's request. The fact that union leaders were able to defer the strike without reference to the workers, was regarded in manufacturing circles of evidence that the Federation representatives dominate the situation.

Three Pilots, Two Opinions and Some Air Mail Dope

REPEATING in substance, and to a large extent in phraseology, what he said before the Senate committee on post office affairs regarding the cancellation of air mail contracts and the effects of this action on aviation development in America, E. V. Rickenbacker spoke this week before the Detroit Section of the S.A.E. "The aircraft industry today," said Colonel Rickenbacker, "is disintegrating as rapidly as a sand dune in the Sahara Desert. Every mile we fly just as surely brings us one mile closer to complete bankruptcy." He was referring to the effect of cancellation on the commercial companies which had mail contracts. "If we got the contracts back tomorrow," the colonel continued, "it would take two years to build passenger and freight business alone back to the point at which it was when the contracts were cancelled."

He again used the word Un-American in characterizing the Government's action in regard to the cancellation of the air mail contracts. He pointed out that the Postmaster General's action had, among other things, thrown 6000 men out of work and caused the disintegration of the highly trained ground personnel.

It will be remembered that the cancelled contracts affected 12 companies and 34 air mail routes totalling

25,000 miles over which nearly 36,000,000 miles of mail flying was done in the year ended June 30, 1933. It has been estimated that the difference between the money paid to the mail flying companies and the amount taken in through the sale of air mail postage amounted to an approximate average of \$5,543,200 per year.

As a return for this so-called subsidy, said Colonel Charles A. Lindbergh

who should know, "we have commercial aircraft engines and equipment and air lines superior to those of any other country."

There are some who persist in asking whether this expenditure of the Government, even with the waste for which politicians may be at least partially responsible, is too high a price to pay for the outstanding development of so important an adjunct to our defenses.

Clarence B. Chamberlin



"Most individual pilots," said this transoceanic flyer to the President, "salute your characteristic firm stand. Your action will in no sense wreck anything. Under your inspired leadership the aeronautical industry will at last really begin to develop in America."

Edward V. Rickenbacker



Said this World War ace, "The aircraft industry today is disintegrating as rapidly as a sand dune in the Sahara." He suggests that it would be well to eliminate from government service those who advised the cancellation of air mail contracts.

Charles A. Lindbergh



This "publicity seeker" (the implication of a lesser known White House secretary) is definitely on record to the effect that "the condemnation of commercial aviation by cancellation of all air mail contracts will necessarily and greatly damage all American aviation."

Wallace Groves Buys Autocar Co. Control

Reported to Have Bought 60% Interest in Common

PHILADELPHIA—Control of the Autocar Co., Ardmore, Pa., has passed into the hands of Wallace Groves, of New York City, it was learned authoritatively here this week. Mr. Groves, it is understood, acquired 60 per cent of the 200,000 outstanding shares of Autocar stock.

Mr. Groves, a youngish man still under 40, is described as an independent operator with no bank or brokerage connections.

The story leading up to Groves' acquisition of control really begins when the Clarkes and their friends sold out their stock in Autocar to Prince & Whitely, New York bankers. Shortly thereafter Prince & Whitely split up the stock three for one. This made 200,000 shares, of which Prince & Whitely retained 80,000.

Then came the crash of 1929. Prince & Whitely sold its Autocar and other holdings to the Prince & Whitely Investment Trust. In the fall of 1930, Prince & Whitely went into bankruptcy which did not affect the trust.

Shortly thereafter the trust was reorganized and renamed the Phoenix Investment Trust.

Last year Wallace Groves got control of Phoenix and so came into possession of the 80,000 shares of Autocar stock. This did not give him control but it was the largest block owned. Early this year Mr. Groves bought the 40,000 shares of Autocar stock owned by Walter Janney, Philadelphia investment banker, long interested in the Autocar company and long a member of its board of directors. This gave Mr. Groves 120,000 of the 200,000 shares.

The annual stockholders' meeting was held March 9 at which time Mr. Groves appeared, spoke optimistically

of the opportunities in the truck industry, of the future of the Autocar Co. and endorsed the management and policies of President Robert P. Page, Jr. Mr. Groves was elected to the board of directors and Mr. Janney was among those reelected.

Feb. Output Biggest Since June Last Year

WASHINGTON—Motor vehicle production in February in the United States and Canada reached the highest level since last June with a total of 243,947 cars and trucks, a gain of 45 per cent over the preceding month and of 122 per cent over February, 1933. A comparative summary follows:

| | Feb., 1934 | Jan., 1934 | Feb., 1933 |
|-------------|------------|------------|------------|
| Cars | 197,381 | 121,299 | 94,517 |
| Trucks | 46,566 | 46,203 | 15,669 |
| Total ... | 243,947 | 167,502 | 110,186 |

Brewster Builds Custom Jobs on 127-in. Ford V-8 Chassis

NEW YORK—Brewster & Co., Rolls-Royce of America subsidiary and famous builder of carriages and custom bodies, is displaying a "cabriolet de ville" on a modified 127 in. Ford V-8 chassis. The new job is a chauffeur driven design and is reported to be the first of a series of such cars which Brewster will build to sell for about \$3,500.

Chevrolet Opens Parts Warehouse in Detroit

DETROIT—A new parts warehouse, located at 435 Amsterdam Avenue, was opened last week by Chevrolet Motor Company, to serve 257 dealers and 600 garages of the Detroit area. Dealers formerly received their Chevrolet parts from Flint and the new unit is expected to cut down shipping time and improve efficiency.

NEW

New Pierce at \$2,195

BUFFALO—A new, lower-priced, eight-cylinder series known as the 836A, is being introduced by Pierce-Arrow with a two-door brougham at \$2,195 and a club sedan at \$2,295. The 136-in. wheel-base chassis carries an eight-cylinder 3½ x 4¼ in. engine.

Waukesha Making Refrigerator

WAUKESHA, WIS.—Waukesha Motor Co. has announced the introduction of three new items, a milk cooler, a refrigerator and an ice maker, each one operated by a small gasoline engine, and designed to meet needs of farmers and others in more or less isolated places. Already a demand has been developed making possible quantity production.

Chrysler Using Part of Continental Plant

DETROIT—Continental Motors is reported to have leased a major portion of its Jefferson Avenue plant to Chrysler for the assembly of front ends. Continental also is understood to be making parts for Chrysler.

U. S. Drivers Enter Italian Sweepstakes

WASHINGTON—Pete DePaolo and Lou Moore will drive Miller Specials in the \$20,000 Italian Sweepstakes to be run in Tripoli on May 6.

Chevrolet Promotes Timper

DETROIT—E. W. Timper has been named manager of sales promotion of Chevrolet, succeeding C. P. Fiskien who became advertising manager last week. He was former assistant promotion manager.

Union Leaders Address Workers



March 24, 1934

William Collins, Federation organizer, makes a point at a union meeting. Seated at the left are Melvin Owen, financial secretary of the union, and A. E. Greer, president of the Hudson local

NEWS

Dealers Have Only 10-20 Day Supply of New Cars Despite High Production Rate

Car Shortage Would Follow Quickly If Strikes Shut Down Factories—Ford, Buick, Studebaker and Packard Dealers Reported To Be In the Best Inventory Position

by Athel F. Denham,

Detroit Editor, Automotive Industries

Highway Officials Hit Railroad Propaganda

WASHINGTON—It is not the total weight the heavily-laden motor vehicle carries, but how it is carried, that should interest lawmakers who are concerned with protecting the country's roads and bridges, according to the American Association of State Highway Officials in its report "Who Shall Use the Highways and How."

In language the average citizen understands, the highway engineers explain that the stress on roads is governed by wheel loads and that, with a given load, strain on bridges is lessened if vehicle length is increased.

The report is looked upon as a guide to lawmakers and enforcement officials on many of the points on which railroads and highway users disagree. Railroads are criticized for their propaganda against the scientific methods used by road engineers in arriving at their conclusions.

Willard on 36-Hr. Week

CLEVELAND—The 36-hour week has been adopted by the Willard Storage Battery Co., effective March 18, with the same weekly pay that employees have been receiving for 40 hours. This change, it is reported, will bring the wage rate above the 1929 level by 11 per cent. About 1000 men are said to be affected.

Marshall Succeeds Bartsch

DETROIT—Announcement has been made of appointment of L. D. Marshall as general parts and service manager, Pontiac Motor, succeeding A. H. Bartsch who has resigned.

Automotive Gear Earnings

RICHMOND, IND.—A net income after taxes, depreciation and other charges of \$27,829 is reported by the Automotive Gear Works, Inc., for 1933 as compared with \$15,260 in 1932.

DETROIT—Despite the fact that production so far this year is well ahead of last year's totals, dealer stocks of new cars have not as yet reached the 200,000 mark, factory records indicate. At this time last year, retail stocks were above this point due, of course, primarily to low retail deliveries in February when the banking crisis developed. Stocks of used cars in dealers' hands also are somewhat below the figures for the same time last year.

In view of the much more active retail market this year, the condition can hardly be called satisfactory especially with the possibility of major shut-downs at car plants due to labor troubles. If a general strike should occur, it is estimated that within 10 to 20 days, some 20,000 out of a total of 35,000 dealers would find themselves without new cars to sell. Nationally dealers now in the best inventory position in case of a strike include the Ford, Buick, Studebaker and Packard organizations. Dealer stocks for the majority of the remaining companies are spotty, differing materially with local conditions.

Domestic shipments of 10,030 Plymouths for the week ending March 10 is the largest single week's shipments in the history of the Plymouth Motor Corp., according to a report by H. G. Moock, general sales manager. This shipment record is nine times greater than the same week of last year. Delivery of 6,614 Plymouth cars at retail during the week is an increase of 30.2 per cent over the previous week and more than five times greater than the same week of 1933. This delivery point was not reached last year until June, which is usually considered the peak of the selling season. Unfilled Plymouth orders up to and including March 14 were 64,996, as compared with 10,936 unfilled orders the same date of last year. These figures include domestic, export and Canadian.

Chevrolet retail deliveries of cars and trucks during the first ten days in March totaled 21,500 units, according to reports from field sales officials received by William H. Holler, general sales manager. This represents a 250 per cent increase over the same 10-day period in March, 1933, and an increase of more than 70 per cent over the first 10 days in February of this year.

Shipments of Terraplanes and Hudsons for the week ending March 10, totaled 3667. For the week ending March 10, Hudson and Terraplane retail sales

totalled 1380 cars, according to Chester G. Abbott, general sales manager. This is the largest weekly total since the first week of July, 1931. To date sales in March are 430 per cent better than they were for the same period in 1933.

"Sales of Hudsons and Terraplanes are not only running high in comparison with our own performance of previous periods, but we are showing a material improvement in our position in the industry. Here in Wayne County, the home of the automobile, Hudson-built cars ranked fourth in sales volume for the first half of March. We are finding ourselves in fourth position in other important centers. I have before me reports which I have just received that indicate that we hold this same position in Buffalo, N. Y., Richmond, Va., Cleveland, Ohio, Minneapolis and St. Paul, Minn., as well as other key locations. We are third in Salt Lake City.

Dodge dealers' retail deliveries, according to reports so far received, show that during the week ending March 10, Dodge dealers delivered 4732 vehicles (3900 passenger cars and 832 trucks), as against 3886 cars and trucks delivered during the preceding week—a gain of 846 units, or 21.8 per cent. Compared to the business done in the corresponding period of 1933 this is an increase of 439 per cent. Dodge dealers' deliveries for the first 10 weeks of 1934 totaled 29,860 passenger cars and trucks, as against 14,083 deliveries during the same 10 weeks of 1933—an increase of 15,777 deliveries of 112 per cent. Dodge truck deliveries, which rose from 807 in the first 10 weeks of 1933, to 6448 in the same period of 1934 showed a gain of 699 per cent.

Ford of Canada Sets \$5 Daily Minimum

EAST WINDSOR, ONT.—Restoration of the \$5-a-day minimum wage for factory employees in the main plant and branch assembly plants of the Ford Motor Company of Canada, Limited, has been announced by Wallace R. Campbell, president. This means a 25 per cent increase in the minimum wage rate of Ford factory employees. The former minimum was \$4-a-day. The increase was made effective immediately. The increase affects a total of 3453 employees of Ford plants in East Windsor, Toronto and other Ford assembly branches.

St. Louis GM Workers Ask Labor Board Vote

Want National Body to Act on Regional Board Findings

WASHINGTON—Coming upon the heels of the strike threat of American Federation of Labor employees in automotive plants in the Detroit and surrounding areas, special significance is seen in the petition presented Monday to the National Labor Board by Federation employees of General Motors plants in St. Louis requesting an election to determine representatives for collective bargaining. The move of the St. Louis employees was looked upon as being timed with the threat of William Collins to institute a strike on behalf of Federation workers in the northern plants. The St. Louis workers asked that the National Labor Board "enforce compliance with the decision of the St. Louis Regional Labor Board" rendered Feb. 13.

While the St. Louis board held that there was no evidence that plant managers for the Chevrolet Motor Co. and the Fisher Body Co. had ever refused to talk with the men individually or in groups, it held there was evidence of actions "almost to the point of intimidation" by employers urging workers to join the company employee association, and ruled in favor of reinstatement of men who had been discharged. The board has taken no action on the petition of the St. Louis delegation, headed by John G. Bostwick, president, and A. J. Pickett, counsel, for the complaining organization, the United Automobile Workers Federal Labor Union. Chairman Wagner of the board was in New

York when the petition was presented and the board made no announcement as to what action it may take on the petition. Also the general automobile strike situation probably had a bearing against immediate action on the petition.

Dealers Criticize Truck Selling Code

PHILADELPHIA—Will it be necessary to set up and finance separate local administrative agencies under the heavy duty truck code, is one of the questions dealers are asking following the filing of proposed code with NRA?

Some dealers also regard the fleet provision as too lax, holding that the \$15,000 rule now in force is a better solution than the one in the code which makes operators of 10 or more trucks, or buyers of five or more trucks in one year, eligible. The scale of depreciation for trucks selling under \$1,000 also is being criticized as being too rapid, while the salvage values permitted are regarded as too high. Difficulties in determining delivered prices on merchandise already sold for the purpose of calculating maximum allowances, also are pointed out. The differences in maximum allowances between the different price classes also is causing some concern in connection with trucks selling near the border lines.

Muskegon Reports

MUSKEGON—Muskegon Motor Specialties Company sustained a net loss of \$55,323 in 1933, against loss of \$167,802 in 1932.

NACC Brief Protests Federal Excise Taxes

Discriminatory Levies Rob Industry of Benefits of Technological Advances

WASHINGTON. — Discriminatory Federal taxes on automobiles and automotive products, including gasoline, were described as an impediment to the efforts of the motor industry to hasten business recovery in a brief opposing the continuance of these levies filed by the National Automobile Chamber of Commerce with the Senate Finance Committee.

"Code compliance, with increased wages and higher material costs, plus the maintenance of the Federal excise taxes," according to the brief, "means cancelling any cost reduction achieved through engineering and manufacturing progress. The industry is thereby unable to realize the benefits from widened markets which should be available through its consistent efforts to reduce the cost of its product to the consumer."

Members of the Senate Committee were referred to the report of the House Ways and Means Sub-Committee on "Double Taxation" and to the Bureau of Public Roads for evidence of the extent to which highway users have been made the victims of double, treble and, in some communities, even quadruple taxation through the payment of special levies in more than two-score forms to the various taxing authorities.

Total collections of these Federal, State and local motor taxes in 1933, the brief recites, were estimated at \$1,170,000,000, which was 26 per cent more than the 1929 total, in spite of the fact that there has been a 10 per cent shrinkage in motor vehicle registrations during the period.

The brief also warns of the effect which Federal invasion of the field of motor vehicle taxation is having upon State road building and highway bond service policies.

Chevrolet Shifts Heads of Manufacturing Plants

DETROIT—Recent personnel changes in Chevrolet include William Scott, now factory manager, drop forging and spring plant, and formerly general superintendent of the motor plant. A. G. Sullivan becomes general superintendent of manufacturing at Flint. M. K. Hovey has been named general superintendent of the motor plant succeeding Mr. Scott and continues as chief inspector. I. B. Scofield is the new general night superintendent of the motor plant. S. J. Kaiser succeeds him as master mechanic. H. F. Howard is the new superintendent of the Flint assembly plant coming from Indianapolis where he was plant manager of the commercial body plant.

S. A. E. Strengthens Staff Organization

Edward F. (Ed to you) Lowe has been named assistant general manager of the S.A.E., as reported last week in *Automotive Industries*. He is shown here on Secretary-General Manager John Warner's right, whose right hand man he will be. Simultaneously, C. B. Whittlesey, Jr., long an S.A.E. staff member, was named assistant secretary.

Widely known throughout the industry, Mr. Lowe was one of the organizers of the Monarch Governor Co. in 1914.

Later he joined K. P. Products Co. as general manager and when that company merged with Handy Governor, became vice-president of that organization. Mr. Lowe also has been an active figure in Society affairs, having been treasurer and vice-chairman of the Metropolitan Section, chairman of the National Membership Committee, member of the T. & M. Activity Committee, member of the parts and fittings division of the Standards Committee, and chairman of the House Committee.



"Ed" Lowe

John Warner

C. B. Whittlesey, Jr.

March 24, 1934

Automotive Industries

Parts Makers Will Spend \$100,000,000 for Capital Goods, Carlton Says, If Congress Ends Uncertainty

WASHINGTON. — Automotive parts and equipment manufacturers will invest \$100,000,000 in



C. C. Carlton

capital goods this year if Congress will remove the fear and uncertainty that is causing the industry's leaders to withhold orders for new production facilities, according to a telegram received by the National Association of Manufacturers from C. C. Carlton, president of the Automotive Parts and

Equipment Manufacturers, Inc.

Mr. Carlton's statement was contained in a request that the N.A.M. represent the automotive parts and equipment industry in registering opposition to the Fletcher-Rayburn Securities Exchange Bill at the Senate Committee hearing. Mr. Carlton's telegram follows:

"Have authority from automotive Parts and Equipment Manufacturing industry comprising approximately 1200 manufacturers located in 315 cities in 39 states, employing at present 200,000 men, with prospective sales this year over \$800,000,000, to protest Fletcher-Rayburn Bill in present form. Our products are consumers' goods and our factories will invest \$100,000,000 in capital goods in year 1934 if Congress will remove fear and uncertainty in order that leaders in our industry may deem it advisable to proceed with the present business prospects uninterrupted."

few abuses which the Coordinator has been able to find which adversely affect the public interest. Furthermore, the bulletin states that the code provides for decentralized regulation at the expense of the industry, while control by the I.C.C. would be delegated largely to the State Commissions which have yet to demonstrate their ability to regulate intrastate traffic.

U.S. Moves for Court Test in Weirton Case

Asks Injunction Restraining Violations of Section 7 (a)

WASHINGTON — Early court determination of collective bargaining issues disturbing both the steel and automotive industries appears assured following the government's announcement that it would seek an injunction restraining the Weirton Steel Co. from violating Section 7(a) of the National Industrial Recovery Act.

The bill of complaint asks that the company be restrained from violating Section 7(a), from discharging, laying off or changing the conditions of employment of any of its employees on account of union affiliations, and from interfering in any way in an election conducted by the employees or by any agency designated by them. For this purpose the bill prays for an order requiring the company to file with the court identification lists of its employees and such other documents and records as may be necessary for the conduct of an election. The bill also prays for an order reinstating those employees who were discharged or refused employment because of their union activities or relations.

The case marks the first court test of the collective bargaining section of the Recovery Act and the powers of the National Labor Board. It is clear that the NRA, in its enforcement drive, has concluded to come to grips with industry and see the vital issues in the long-drawn-out Weirton case settled once and for all. The outcome obviously is of transcending importance.

Borg-Warner Organizes Export Subsidiary Co.

CHICAGO — Borg-Warner International Corporation, a new subsidiary of Borg-Warner Corporation, has been organized to further the export sales of automotive shipment and parts produced by the several constituent Borg-Warner companies, including Borg and Beck, Detroit Gear and Machine Co., Ingersoll Steel and Disc Co., Long Manufacturing Co., Borg-Warner Service Parts Co., Marvel-Wheeler-Schebler Carburetor Co., Mechanics Universal Joint Company, Morse Chain Company, Norge Corporation, Rockford Drilling Machine Co. and Warner Gear Co.

The officers of the new corporation are R. W. Gifford, president; C. E. Weisse, vice-president; and Mathew Keck, secretary-treasurer.

Code Violators Will Lose U. S. Contracts

Executive Order Empowers NRA Administrator to Decide Without Action by Courts

WASHINGTON—Vast discretionary powers to cancel government contracts are vested in the Administrator for Industrial Recovery by an executive order issued by the President requiring that all bidders on contracts to be placed or financed by the Federal government certify that they are complying and will continue to comply with the codes to which they are subject or, if they are subject to none, with the President's Reemployment agreement.

The order is the latest move in the government's effort to strengthen enforcement of the Recovery Act and particularly of the labor sections of the codes. In view of the tremendous current expenditures of the government, the far-reaching potentialities of the order are self-evident.

In the event of a dispute, if the Administrator finds non-compliance, a contract may be cancelled and any unfulfilled portion of it completed by the government through open market purchases or otherwise at the expense of the contractor. Under the terms of the order, the government may take this summary action on the Administrator's findings of non-compliance without any court decision on the issues involved. The contractor can, of course, seek damages in court.

The order applies to all contracts paid for by Federal funds, whether the money is disbursed directly by the government or indirectly through government corporation, the states or local governments. Penalty for false certification may be \$500 or six months in jail. The order is not to be construed as requiring the use of materials produced in the United States nor to require price differentials in favor of such materials.

A.T.A. Attack Eastman Report on Regulation

Federal Coordinator Eastman's report recommending regulation of motor carriers by the Interstate Commerce Commission is sharply attacked in a bulletin issued on March 18 by American Trucking Associations, Inc. The bulletin charges that the proposed regulation would (1) oppress small enterprises; (2) reduce employment; (3) fix rates; (4) destroy the flexibility of trucking, and (5) place the selection of the transportation agency to be used in the hands of the "railroad-minded" I.C.C.

A.T.A. also emphasizes that the trucking code, as the Coordinator states, is not a temporary expedient, as the President has made it clear that he regards NRA as a permanent feature of our economy. It also points out that the code is ready for immediate administration whereas the I.C.C. has no data to guide it in the regulation of motor carriers. Moreover, A.T.A. asserts that the code will stabilize the industry and will correct the

Budd Poll a Fiasco as Only 350 Vote

Union Boycotts Election Held Under NRA Auspices

PHILADELPHIA—General Johnson's own poll of Budd employees held Tuesday of this week ended in a fiasco with a total of about 350 ballots out of a possible 6500 qualified voters including 800 men out of the original strikers who have not been reemployed.

Thus the anticipated show of strength on the part of the A. F. of L. failed to materialize. At the same time the tactics of union organizers in actually preventing a "showdown" by picketing the polling place and instructing their members not to vote may be taken by the NRA as evidence of the arbitrary and uncompromising attitude of the professional labor leaders.

Advice from A. F. of L. headquarters in Philadelphia on Thursday indicates a strong possibility of another strike vote which may call out more than 1000 men on the Budd payroll who are said to be union members. A mass meeting is scheduled for March 22 and if a strike vote is not taken then, it is almost certain to be put through next Monday or Tuesday. On the other hand there is a strong possibility that union action may be greatly affected by the proceedings in Washington on the general automotive labor situation.

Out of a maze of reports, partisan and otherwise, a number of clear cut facts stand out. First is the formal announcement of the poll by General Johnson, the text of which is given below. Substantially the same language was used in a printed bulletin signed by General Johnson and posted on every time clock in the Budd plant Tuesday morning.

General Johnson's statement follows:

"I regard the Budd matter as most unfortunate, and I think that Mr. Budd has acted in complete good faith; that the present condition is due to a series of misunderstandings in good faith; that Mr. Budd especially has supported N.R.A., and attempted to comply with the law. From reports of this organization, it is indicated to me that there is the employee representation desired by a majority of the men.

"I am not convinced, however, that in arriving at this state of the law, all employees have been accorded to the letter their full rights under the statute, and to purge the situation of this condition, and permit this much needed production and employment to proceed, I suggest that:

"1. There be a published announcement of an election on March 20 at a proper place outside the Company's plant.

"2. The election will be held by my representatives.

"3. The Budd Company will in nowise interfere. After the election it will furnish certified lists of names and signatures of:

"(a) Men employed at date of strike (November 13, 1933), who are not now employed.

"(b) Men on the payroll as of March 12, 1934.

"4. After the election, my representative will check the ballots against these lists

and throw out all ballots of men not on certified lists.

"5. The present plan of employees representation will continue unless a majority of the men whose names are on the lists vote affirmatively on the following question:

"Do you favor the United Automobile Workers' Federal Union No. 18763 to represent you in Collective Bargaining?"

The most significant point in General Johnson's bulletin is that the only issue is: "Do you favor representation by the United Automobile Workers' Federal Union 18763 of the A. F. of L.?" This pinned the issue squarely on the union since only the strength of affirmative votes could prove their contention that the majority of Budd employees favored the union. Despite the fact that the balloting was to be supervised by George Buckley, special assistant NRA administrator and J. H. Wootton, an attache of the National Compliance Board, the union officials still cried "wolf" and protested against the signing of ballots by each individual.

Anticipating this objection on the strength of conversations with union officials, George Buckley conferred with Mr. Budd who subsequently signed and had posted the following notice on the time clocks:

"In order to clear up any misunderstanding, I wish to reiterate that the Company will in no wise interfere with the right of any of the men now in its employ to vote in the Poll held today by Mr. Buckley under instructions from General Johnson, nor will it discriminate against any who choose to vote. Under the rules laid down by General Johnson and Mr. Buckley no one connected with the Company will ever see any of the signed ballots."

The voting place, Pulaski Hall, several blocks away from the Budd plant was kept open 12 hours from 7.00 a.m. to 7.00 p.m. to permit employed workers to cast their ballots either in the morning or after working hours. CWA workers were engaged to count the ballots and check the signatures against the list to be certified by the Budd Company. Balloting by the entire force was not expected since the poll was specifically confined by General Johnson's instructions to those who would vote affirmatively on union representation.

One of the moot points in connection

with the poll is the advice that a notice was posted in the Budd plant a day before the election, signed by employee representatives, which said:

"This vote will be held on the outside of the plant and it is not necessary for any employee who is in favor of employee representation to vote.

"Any one who chooses to vote may vote but he must sign his name and number on the ballot.

"Bear in mind that it is up to the union to prove that they have a majority of the employees of this plant as members."

We understand that this notice was posted without Mr. Budd's knowledge or permission and was removed immediately at his request. Obviously the notice is simply a logical interpretation of the official statement issued by General Johnson.

What the next move will be now, no one is prepared to say. The Budd Company's position obviously remains in status quo while the union has now placed itself in a defensive position so far as General Johnson is concerned.

Steel Makers Protest Wagner and Connery Bills

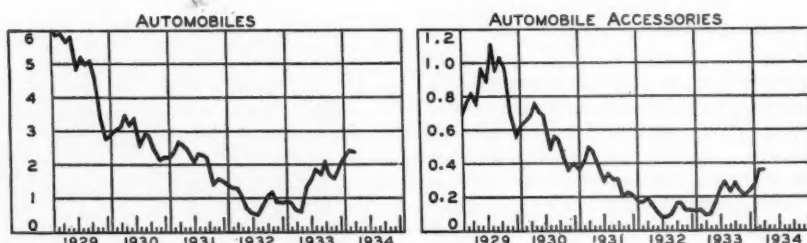
NEW YORK—Protesting that the Wagner Labor Disputes Bill and the Connery 30-Hr. Bill would "saddle American workers with a dictatorship of union leaders," 61 steel manufacturers have petitioned Congress not to enact these legislative proposals. The petition charges that a group of union leaders who cannot properly claim to represent 10 per cent of American labor are seeking to obtain a union monopoly. It also asserts that the menace of these bills already is slowing down recovery.

Pittsburgh Plate Glass

PITTSBURGH—In the year 1933 net income of Pittsburgh Plate Glass Company was \$3,993,934, compared with a net loss of \$60,737 reported in 1932.

On December 31, 1933, current assets amounted to \$29,444,238 and current liabilities to \$3,667,179. Net working capital was \$25,777,059.

Market Value of Listed Motor Stocks



22 Companies
\$2,400,914,669
2,454,805,551

March 1
Feb. 1

41 Companies
\$371,701,299
371,314,062

—New York Stock Exchange Bulletin

March 24, 1934

Automotive Industries

Automotive Code Authorities Empowered to Adjust Trade Practice Complaints Only "On Reference"

WASHINGTON—Code Authorities of the automotive parts and equipment industry, the wholesale automotive trade and the motor vehicle retailing trade, have been authorized to adjust trade practice complaints only *on reference* by State Compliance Directors appointed by the National Emergency Council.

In accordance with NRA Bulletin No. 7, Manual for the Adjustment of Complaints, all complaints of violation of the trade practice rules of these codes should be filed with a State Director who will refer them to the local adjustment agency established by the Code Authority. The adjustment agency then will investigate the complaint and, if it is well founded will attempt to adjust it. If it is successful, it reports accordingly to the State Director, or if unable to obtain an adjustment, it refers the complaint back to the State Director for further action. In the event complaints are filed with the adjustment agency directly, the agency is required to file a report of the complaint with the State Director before proceeding in its attempts to adjust it.

The effect of the procedure just outlined for handling trade practice complaints in the three coded divisions of the automotive industry mentioned above, is that the Government retains supervision of all adjustment activities of the Code Authorities. The State Directors apparently occupy much the same position in relation to local code adjustment agencies that the NRA member on the national adjustment agency has. The NRA member does not vote on adjustments but may veto them.

No automotive code authority has been authorized to adjust labor complaints.

February Registrations Estimated at 125,000

DETROIT.—Sharp upward revision of earlier estimates of new passenger car registrations in the United States during February has followed the completion of reports from 19 States, and the figure now is placed at 101,500 units, R. L. Polk & Co. reported this week.

Latest reports based on figures from the 19 States indicate an increase in February registrations of 78.28 per cent over those of January, and an increase of 41.94 per cent over February a year ago.

Commercial car sales continued to climb, the reports indicated, with a total registration for February in 19 States of 8,379, compared to 3,368 in February a year ago, or an increase of 148.78 per cent. The estimate for total commercial car registration during February was placed at 24,000 in the Polk report.



C. W. Churchill, one-time Buick vice-president in charge of sales, is now resident industrial adviser for NRA in Washington

Dominion Diesel Formed

TORONTO, ONT.—Initial step is now being taken, according to the Toronto Industrial Commission, toward the introduction in this country of Diesel-engined motor vehicles with the formation of a Canadian company called Dominion Diesel Limited, and the leasing by that firm of factory space in Toronto. The company's charter is a broad one and comprises the power to manufacture and handle Diesel engines and Diesel-motored trucks, aircraft and boats. The company's activities for the present will consist of the assembling of trucks and also the substitution of Diesel motors for others in existing equipment. For the present, the Diesel engines and part of the auxiliary equipment will be imported.

E. C. Fox, vice-president of one of Canada's leading manufacturing industries, is president of the new company.

Canadian Executives Lay U. S. Strike Plans

TORONTO—With a strike in prospect among workers of the automotive industry in the United States there have been quiet but hurried conferences between executives of major manufacturing companies in the U. S. and Canada with a view to the further transfer of production for export business from the American Republic to the Dominion.

At time of writing there has been no definite rearrangement of factory plans to insure uninterrupted flow of auto-

mobile units to other countries but the switch can be made without delay.

In the meantime domestic retail sales in Canada are showing substantial increase. Figures compiled for January show an increase of 17 per cent in number and 13 per cent in value over sales for the corresponding month of 1933. Retail sales for the first month of this year were 2115 motor vehicles, valued at \$2,086,880, as against 1802 with a value of \$1,843,737 for January of last year.

Garlent on Motor Wheel Board

DETROIT—At a recent meeting of the board of directors of Motor Wheel Corp., John E. Garlent, works manager of the Lansing plant, was named to the board which now consists of 11 members.

Union Leaders Will Stick to Agreement

TOLEDO—Automotive plants here building up working forces and production are watching keenly outcome of Detroit labor situation.

Nearly half the local industry is automotive and it is believed 10,000 or more workers would be thrown out of employment here by a general automotive strike.

Local union leaders assert they will live up to agreement to continue under present conditions to April 1 pending more permanent type of agreement.

Willys-Overland has 1400 at work and expects to build up to 2000 at close of week, getting into full production by April 1.

Myers Regulator Co. here, working on schedule of 360,000 window regulators this month, has order for 150,000 units from Ford.



C. P. Fiske, new Chevrolet advertising manager. He was formerly sales promotion manager and prior to that headed Chevrolet's truck sales

Business in Brief

Written by the Guaranty Trust Co., New York, exclusively for Automotive Industries

While general business last week continued its upward course, there was some irregularity in industry, with steel operations moderately lower. Retail sales reached the largest volume for any week so far this year, stimulated by the approach of Easter and the warmer weather. The better retail business was reflected in the largest volume of wholesale business since last August.

Freight Loadings Still Up

Railway freight loadings during the week ended March 10 totaled 612,402 cars, which marked increases of 8,265 cars above those during the preceding week, of 171,041 cars above those a year ago and of 36,921 cars above those two years ago.

Retail Sales Firm

There was little change in department store sales during February, according to the preliminary figures of the Federal Reserve Board. The adjusted index for February stood at 70, as against 69 for both January and December. However, the volume of sales during February was 16 per cent above that in the corresponding period last year.

Power Production Tops 1933

Production of electricity by the electric light and power industry in the United States during the week ended March 10 was 18.4 per cent above that a year ago.

Farm Exports Low

The index of farm exports for January was 93, as against 109 for

December, 97 for January, 1933, and 111 for January, 1932.

Cotton Consumption Steady

Cotton consumed during February amounted to 537,564 bales, including linters, as compared with 565,803 bales during January and 491,805 bales a year ago.

Oil Production Exceeds Federal Limits

Average daily crude oil production for the week ended March 10 amounted to 2,313,900 barrels, which is 31,100 barrels above the Federal allowable figure, as compared with 2,183,300 barrels for the preceding week and 2,115,850 barrels a year ago.

Commodities Continue to Climb

Professor Fisher's index of wholesale commodity prices for the week ended March 17 showed a continuation of the rising trend that has been noticeable for some weeks in the past. The current figure stands at 74.6, which marks the ninth successive rise, as against 74.5 the week before and 74.4 two weeks before.

Federal Reserve Statement

The consolidated statement of the Federal Reserve banks for the week ended March 14 showed decreases of \$5,000,000 in holdings of discounted bills and of \$9,000,000 in holdings of bills bought in the open market. Holdings of government securities remained unchanged. The reserve ratio on March 14 was 68.2 per cent, as against 67.8 per cent a week earlier and 66.3 per cent two weeks earlier.

Pyrene Offers High Gloss Nickel Process

NEWARK, N. J.—A new process for the electro-deposition of nickel known as the Pyrene High Gloss Nickel Process, has been developed and is being licensed by the metal finishing division of the Pyrene Manufacturing Co.

Thick deposits of great brilliance and beauty, it is stated, can be obtained, even at high current densities, in a

highly efficient and stable electrolyte which is entirely self-sustaining from the anode. Among the advantages are claimed the following: nickel deposits of great brilliance irrespective of thickness; elimination of subsequent polishing or color buffing; elimination of re-racking or recleaning previous to chromium plating; high throwing power; higher throwing power of a chromium solution over the Pyrene nickel deposit than over ordinary nickel; a highly efficient, stable, self-sustaining electro-

lyte with a wide operating range; and uniform results at low or high current densities.

This nickel plating process does not entail major changes in equipment or preparatory cleaning methods.

Auto Strike Threat Worries Steel Heads

Motor Leaders Can Count on Sympathetic Aid in Adjustment of Contracts

NEW YORK—The rate at which steel shipments were going forward to motor car manufacturers and parts makers during the forepart of the week showed but little change from last week, but sentiment in the steel market turned decidedly tense under the apprehension of serious labor troubles in the automotive industries.

While the American Iron and Steel Institute placed this week's rate of mill operations at 46.8 per cent of capacity, a gain of 1.2 per cent over the Institute's figures for the preceding week, finishing mills were working at a slower pace, due to a tapering off in specifications from automotive consumers. Up to Tuesday, however, there was no indication of postponements of shipments being sought on a serious scale. In fact, some parts makers appeared to be eager for steel supplies needed to rush through orders for parts to insure continuity of assembly plant operations under any circumstances.

Concern over the extent of the setback that the steel industry would suffer as the result of a strike in the motor car field, its largest market, was secondary to the thought that the principles for which the motor car manufacturers are fighting are identical with those that the steel industry's leaders have espoused ever since Judge Gary's guidance of its policies. In a practical way the steel industry's moral support of the stand of the motor car manufacturers is certain to take the form of harmonious cooperation in adjusting contracts to the needs of the hour, whatever they may be. The matter of second-quarter contracts at prevailing quotations, which steel producers consider inadequate because of higher labor costs, has been shelved pending the clearing of the atmosphere.

Pig Iron—The rate of shipments continues fair, although considerable business that was looked for to be of tonnage proportions is coming through in single car-load dribbles. Code prices are unchanged.

Aluminum—A fair volume of demand for No. 12 alloy continues to come out, the market showing a slightly easier undertone. Virgin metal quotations are unchanged.

Copper—Revamping of the proposed copper code continued this week at hearings in the national capital. The market is marking time at the unchanged quotation of 8c., delivered Connecticut Valley.

Tin—Dull and a shade easier, with spot Straits quoted at 53.65c. at the opening of the week.

Lead—Demand slightly more active.

Zinc—Unchanged.

U. S. Gets Injunction Against Code Violator

First Use of This Legal Process To Enforce Code Compliance

DETROIT—A temporary injunction restraining operators of a chain of filling stations from "giving away oil, premiums, trading stamps, free coupons," etc., in violation of Rule 17 of the Petroleum Code, has been issued here by Standing Master in Chancery William S. Sayres of the U. S. District Court. This is believed to be the first time that the injunctive process has been employed to enforce the National Industrial Recovery Act.

The defendants contended that they were doing an intrastate business and hence Congress had no authority to regulate them under the "commerce clause." The Standing Master, however, upheld the theory of N.I.R.A. that intrastate transactions that affect interstate commerce, are subject constitutionally to Federal regulation, particularly in view of the emergency.

Although the defendants also contended that a temporary injunction would work them irreparable damage, the master held that they should be restrained until the Court finds the law inapplicable to them, on the grounds that not to grant it would work a greater and irreparable injury to the public. The master also felt that the prompt action of the injunctive process was necessary to encourage compliance with the code.

Knudsen Sponsors Safety Contest in 60 G.M. Plants

DETROIT—With the declaration that "safeguarding our employees from accidents is, in my opinion, the greatest and most important task before us at all times," William S. Knudsen, executive vice-president of General Motors Corporation, has sponsored an international safety contest among 60 factories of General Motors. The plants are located in 28 cities in the United States and four cities in Canada.

Two trophies will be given early in 1935 by Mr. Knudsen; one for the plant having the lowest number of hours of work lost because of accidents per thousand hours worked during 1934 and the other to the plant showing the greatest relative improvement in accident prevention during 1934.

Gar Wood Builds Addition to Plant

Gar Wood Industries, Inc., formerly trading under the name of the Wood Hydraulic Hoist & Body Co., Detroit, Mich., is making an extensive addition to its body plant at 409 Connecticut Avenue, Detroit. The building now in course of construction is a modern, steel frame, concrete and brick structure

with production facilities on the ground floor and departmental offices on the second floor. It has 13,000 sq. ft. of floor space and will be used for the production of a complete line of truck tanks, both standard and special, constructed of steel, aluminum and stainless steel.

Hupp Cuts Loss To \$1,778,588

DETROIT—A net loss after charges of \$1,778,588 is reported for 1933 by the Hupp Motor Car Corp. This compares with a 1932 loss of \$4,515,482. Current assets on Dec. 31, 1933, totaled \$5,661,298 of which \$3,624,756 were cash and marketable securities, against current liabilities of \$1,106,837. A year earlier current assets totaled \$7,283,420 and current liabilities \$1,074,133.

Rolls-Royce Reports Loss

SPRINGFIELD, MASS. — Rolls-Royce of America, Inc., reports net loss after charges of \$267,274 in 1933, compared with \$431,526 in the preceding year.

Michigan Registrations Double Last February

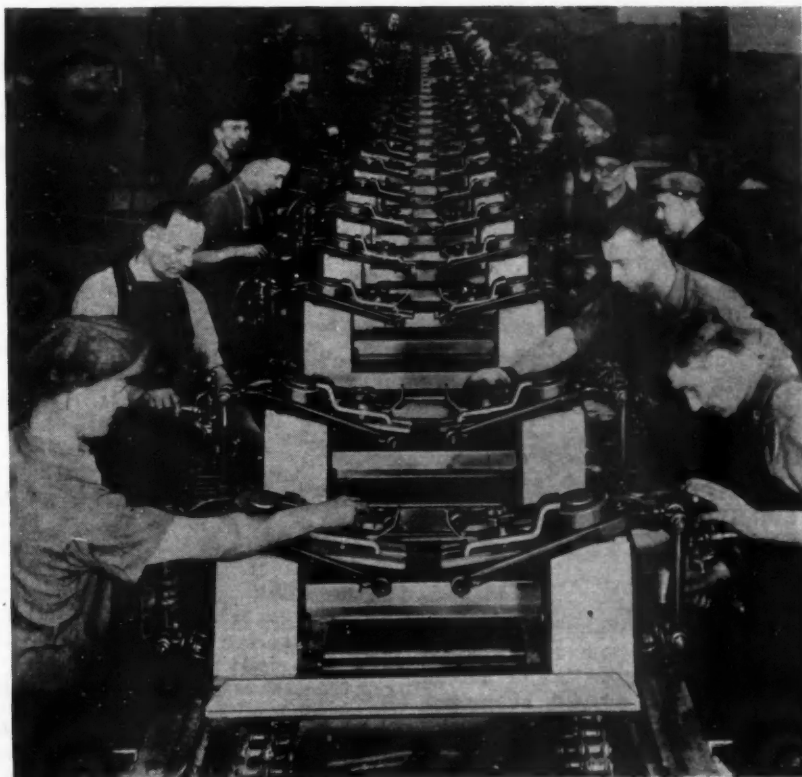
DETROIT—Michigan new car registrations more than doubled totals for January this year and February last year with a total of 8839. Chevrolet regained first place outside of Wayne County, but was behind both Plymouth and Ford in Wayne.

Commercial vehicle registrations were approximately four times registrations in February last year. Chevrolet regained first place with 510 units. Ford showed a decline from January totals. Virtually all other makers recorded gains.

Gilbert Joins Thornton Tandem

The appointment of Frederick C. Gilbert, formerly vice-president, secretary and member of the board of directors of the Timken Detroit Axle Co., as vice-president of the Thornton Tandem Co., is announced by Richard F. Barnum, president. Mr. Gilbert joins the Thornton Tandem Co. in connection with the expansion of production and marketing of its dual-ratio positive four-wheel drive unit for motor trucks.

Dodge Independent Suspension Assembly Line



Independent springing has made a big change in the Dodge assembly line. Here is a view of the line where "floating cushion" units are paired, adjusted, and fitted with brake shoes and other component parts. At the end of the line the completed assemblies meet the chassis line where they are installed by means of special fixtures. Adjustment for caster and camber are made on special gage-equipped fixtures



Ford V-8 Victoria
which has just
gone into pro-
duction

F.T.C. Attacks Steel Code Price Provisions

**Charges Basing Point System
Violates "Pittsburgh Plus"
Order Issued by Commission**

WASHINGTON—Virtually challenging the authority of the NRA to sanction practices permitted under the Steel Code, the Federal Trade Commission this week forwarded to the Senate its report on alleged price fixing and increases in steel prices under the code. Among the charges made by the Commission are that the code places powerful manufacturers or groups of manufacturers in a position to compel the steel industry to discriminate in their favor. To illustrate this charge, the Commission said: "The Detroit automobile manufacturers have forced the Code Authority to approve an arbitrary differential in favor of southern Michigan of \$3 to \$5 per ton." Aside from the basic legal issues it raises, the report is of especial interest to the automotive industry which, as a large steel consumer, has objected strenuously to the effects of code operation on steel prices.

The Commission also charged that the organization of the Code Authority was such that control was in the hands of major producers.

The Commission attacked the code basing point system on the grounds that it violated the Commission's "Pittsburgh plus" order issued in 1924, which required that prices be based on the point at which the shipment originated. The Commission charged further that the code provisions tended to eliminate small enterprises not located at basing points; that they resulted in price discrimination; that they tend to centralize production and fabrication at the basing points; that they minimize the usefulness of water and truck transportation by the imposition of all-rail freight with very limited allowances where buyers haul in their own trucks; that they result in uneconomical cross-hauling; and that they place powerful manufacturers or groups of manufacturers in a position to compel the steel industry to discriminate in their favor.

In dealing with price increases, the Commission especially directs an attack on advances made through the system of "extras" charged by the steel industry.

Taking up the question whether the "enforced violation of the Commission's order in the Pittsburgh plus case can be harmonized with the terms of the National Recovery Act," the Commission clearly indicates a conflict between the law under which it operates and the Recovery Act.

It concedes that the Recovery Act authorizes practices hitherto forbidden by the anti-trust laws but says that at the same time it sought to restrain the promulgation of codes that were designed to promote monopolies or operated to eliminate or oppress or discriminate against small enterprises. Furthermore, it stated, the Recovery Act expressly prohibited codes from permitting monopolies or monopolistic practices. And it claims the code has promoted monopolies.

It suggests a court test as to whether the sanctions under the code are legal. Also it proposes withdrawal from enforcement policies which are held to attain ends that "our national economy has discarded."

M.E.W.A. and N.S.P.A. Elect Code Authority Members

CHICAGO—Results of nation-wide balloting to select five representatives of the Motor & Equipment Wholesalers Association to membership in the permanent Code Authority for the wholesale automotive trade resulted in the election of the following:

S. B. Dean, Nicols, Dean & Gregg, St. Paul, Minn.; E. T. Satchell, E. T. Satchell Co., Allentown, Pa.; Frank R. Stewart, Standard Automotive Sup. Co., Washington, D. C.; George H. Niekamp, Beck & Corbitt Co., St. Louis, Mo.; Tom Glasgow, Glasgow-Stewart Co., Charlotte, N. C.

The results have been certified to S. B. Dean, chairman of the temporary Code Authority, who in turn will certify the selection of the M. E. W. A. representatives to the administration.

DETROIT—Official announcement is made of the election to the National Code Authority for the Wholesale Automotive Trade of the following NSPA wholesaler members:

O. M. Anderson, Northern Automotive Supply Co., Bay City, Mich.

V. C. Anderson, Motor & Axle Parts Service, Inc., Chicago, Ill.

H. N. Nigg, Piston Service Co., Inc., Detroit, Mich.

L. H. Phelps, Phelps-Roberts Corp., Washington, D. C.

A. E. Pouliot, National Bushing & Parts Co., Minneapolis, Minn.

Motor Wheel Plants Are on Three Shifts

LANSING—Motor Wheel's payroll is now three times greater than a year ago, and employment totals 3150, according to a statement made by Harry F. Harper, president, at the annual stockholders' meeting. All plants are operating three shifts at the maximum hours permitted under the code. Mr. Harper also stated that the corporation is getting 64.2 per cent of the industry's wheel business exclusive of Ford and Chevrolet which make their own.

Neely New Head of Graham in Canada

WALKERVILLE—W. H. Neely has been appointed managing director of Graham-Paige Motors (Canada), Ltd., according to an announcement by J. B. Graham, president of the Canadian firm and of the Graham-Paige Motors Corp. of Detroit.

Mr. Neely, who has been associated with Mr. Graham since 1921, and who joined the present American organization in 1927, has been assistant to the president, in charge of engineering, for the past several years. He directed largely the establishment of the Canadian company here in 1931, and selected the personnel for the organization.

As managing director, he takes the post vacated by Harry D. Dodge, who



W. H. Neely

now will devote his entire time to the Graham-Paige International Corp., of which he recently was appointed managing director. The International Corp. headed by Robert C. Graham, president, handles all the export business for Graham automobiles.



The late Benjamin F. Wright, chief engineer of the Dodge truck division, who died recently of pneumonia

"Law" Labor Wants Enforced Isn't Law

Demands on National Labor Board Run Contrary to Administration's Decisions

WASHINGTON—The "law" which labor leadership demanded the National Labor Board enforce at last week's automotive hearing is not the law as it has been interpreted by the administration.

The demands presented by the labor leaders call for recognition of the representatives selected by the majority, as representatives of all employees. NRA has ruled quite definitely that his is contrary to the law as minority groups may select their own representatives, or may deal individually. In this connection there is some speculation as to whether labor leaders will accept the majority rule where the majority favors a works council.

Another aspect of the majority question is that if majority representatives are to represent all the employees, the ultimate result is a closed shop. And NRA has ruled that closed shop agreements are illegal under the National Industrial Recovery Act.

The demand for the installation of the seniority system collides head on not only with the merit clause in the automobile manufacturing code, but also with the letter of interpretation which President Roosevelt wrote to General Johnson last fall. In the letter the President said "... there is nothing in the provisions of Section 7a to interfere with the bona fide exercise of the right of an employer to select, retain and advance employees on the basis of individual merit..."

By a curious coincidence, on the same day that labor leadership was demanding that the Labor Board en-

force its interpretation of the law, despite the conflict with official interpretation, the same leadership was at the other end of Pennsylvania Avenue in effect admitting to the Senate Committee on Education and Labor that because the Recovery Act would not permit such interpretation, the Wagner Labor Disputes Bill was necessary to close the "loop-holes" in Section 7 of N.I.R.A.

Fisher Guild Forms Alumni Organization

DETROIT—Winners of the 15 four-year university scholarships awarded in the first three coach-building competitions of the Fisher Body Craftsman's Guild have formed an international alumni association, W. S. McLean, secretary of the parent organization, revealed today.

Albert Fischer, Waukegan, Ill., now a third-year student in the engineering college at the University of Illinois, has been elected president for the ensuing year by members of the unique society, which is to be known as the Guild Alumni. Howard Jennings, Denver, Colo., is secretary. He is a freshman at the University of Colorado.

Layton W. Averill

DETROIT—Layton W. Averill, Chrysler Motors engineer died March 12 at Grace Hospital following a three-month illness. He was 37 years old. He is survived by his wife and one daughter.

Industry Employs 237,440 In Michigan in February

DETROIT—Employment in the automobile industry in Michigan during February totaled 237,440 compared with 143,662 in January and 143,662 in February, 1933, according to figures based on reports of 108 companies and compiled by the State department of labor and industry.

Aggregate weekly payrolls were \$5,895,420 in February against \$4,346,431 in January and \$2,685,558 in January last year.

Average weekly earnings per capita were \$24.83 in February, \$21.43 in January and \$18.69 in February, 1933.

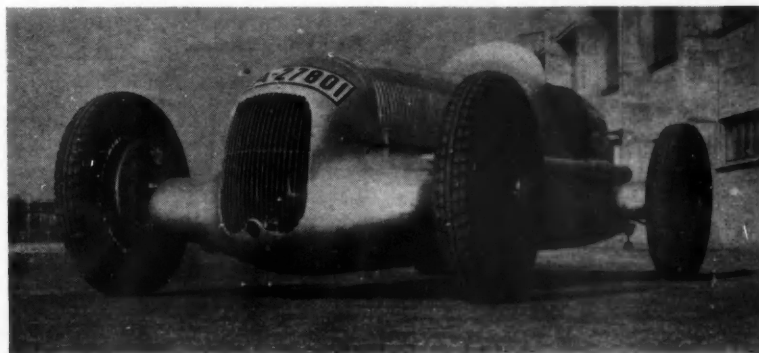
NRA Promotes Glancy

WASHINGTON—A. R. Glancy, one time president of Oakland Motor Car Co., has been appointed NRA division administrator in charge of heavy and capital goods industries. Mr. Glancy's connection with NRA was first reported by *Automotive Industries* in its issue of Feb. 17.

Edward C. Molitor

DETROIT—Edward C. Molitor, 49 years old, died Thursday after an illness of eight years. He was at one time owner of the E. C. Molitor Co., now the Gray-Molitor Co., and was later with Cadillac Motor Car Co., then joined the staff of General Motors Export Corp. Illness forced him to retire eight years ago.

New Mercedes-Benz Racer



The new racing machine which Mercedes-Benz has built to compete in international races under the new rules which will be in effect during the next three years. These limit weight to 1650 lb. It is stated that the displacement of the eight-cylinder in-line engine (equipped with supercharger) is about 183 cu. in. Few technical details are disclosed, except that the engine connects through a propeller shaft running through a tunnel to a four-speed transmission carried at the rear of the

chassis, that independent suspension is used all around, and that the hydraulic brakes operate on brake drums of quite large diameter, provided with cooling fins, and secured to the wire wheels. It is claimed that the low center of gravity, independent suspension, favorable weight distribution and independent steering assure good road-holding qualities and stability on curves, and that the new car has performed very satisfactory in the trial runs that have been made.

Cost of Living Rises

NEW YORK.—The rise in living costs of wage-earners that began in January continued in February, according to the regular monthly survey of the National Industrial Conference Board. Living costs in February were 1.0 per cent higher than in January and 8.6 per cent higher than in February, 1933, but 21.6 per cent lower than in February, 1929. The February rise was due to substantial increases in food prices and moderate advances in all the other major items of expenditure, except coal.

Rim Inspections Double

CLEVELAND—Rim output in February amounted to 1,262,311 which was more than double the February, 1933, total of 579,789. In the first two months of the year, the total of rims inspected and approved by the Tire and Rim Association reached 2,051,585 as compared with 1,307,097 in the similar 1932 period.

Transportation Materials Company Is Formed

PHILADELPHIA—Boyd V. Evans, former chief engineer of Detroit Motor Bus Co. and lately of Electric Service Supplies Co., together with W. L. Strawbridge, formerly representing Electric Service Supplies Co., has organized the Transportation Materials Co. with offices at 1916 Fairmount Ave., in this city.

Hopkins Rejoins Cleveland P. & S.

CLEVELAND—P. J. Hopkins who was formerly employed by The Cleveland Punch & Shear Works Company from 1910 until he left to engage in business for himself in 1927, has again returned to the company in a sales capacity.

Republic Names Caulley

YOUNGSTOWN, OHIO—Ralph G. Caulley has joined the Detroit district sales office of Republic Steel Corporation, according to announcement made by N. J. Clarke, vice-president in charge of sales. Mr. Caulley had been connected with Wheeling Steel Corporation for 14 years, the last seven of which were spent in the Detroit district.

Lower Exports Cut Machinery Orders

CLEVELAND — The index of orders for machine tools dropped from 126.2 in December to 101.7 in January due to the reduction in export demand, according to the current report issued by the National Machine Tool Builders' Assn. Domestic business continues to increase and

unfilled orders are beginning to pile up. Much of the new business is said to be of emergency nature required for immediate delivery.

New Book by Sherman

BOSTON—"If You Want to Get Ahead" is the title of a book written by Ray W. Sherman which will be published by Little, Brown & Co. of this city, on April 6. Mr. Sherman is now vice-president of Automotive Merchandising, Inc., and is well known in the industry, having been editor of several leading trade publications, and at one time an executive of the old Automotive Equipment Association.

Stearns Conveyor Co. Moved to Milwaukee

MILWAUKEE—The Chain Belt Co. has completed the transfer to Milwaukee of all the manufacturing operations of its subsidiary, the Stearns Conveyor Co. of Cleveland, Ohio. George M. Dyke, vice-president and operating manager of the Stearns unit, will again be associated with the parent company in an executive capacity.

CALENDAR OF COMING EVENTS

SHOWS

| | |
|-------------------------------------------------|-------------|
| Cleveland (Automotive Service Industries) | Nov. 5-9 |
| Geneva, Switzerland | March 16-25 |

MEETINGS

| | |
|-------------------------------------------------------------------|-------------|
| American Chemical Society, St. Petersburg, Fla. | March 25-30 |
| American Welding Society, New York City | April 26 |
| U. S. Chamber of Commerce, Washington | May 1-4 |
| National Battery Mfgs. Assoc., Cleveland, O. (Annual) | May 16-18 |
| S.A.E. Summer Meeting, Saranac Lake, N. Y. | June 17-22 |
| American Society for Testing Materials, Atlantic City, N. J. | June 25-29 |
| American Trade Executives, Wernersville, Pa. | Sept. 9 |
| American Chemical Society, Cleveland, Ohio | Sept. 10-14 |
| American Welding Society, New York City | Oct. 1-5 |

CONVENTIONS

| | |
|-----------------------------------------------------------|----------|
| American Gear Mfg. Assoc., Wilkesburg, Pa. (Annual) | May 2-4 |
| American Society for Metals, New York City | Oct. 1-5 |

CONGRESS

| | |
|----------------------------------------------------|------------|
| American Society for Metals, New York City | Oct. 1-5 |
| International Foundry Congress, Philadelphia | Oct. 22-26 |
| American Foundrymen's Assoc., Philadelphia | Oct. 22-26 |

"Met." Section Discusses Low-Grade Fuel Engines

NEW YORK—Spark-ignition engines for burning inexpensive fuels were discussed by three engineers before 250 members and guests of the Metropolitan Section of the Society of Automotive Engineers at their meeting here last evening. F. H. Dutcher of Columbia University, past chairman of the Section, delivered the principal paper. F. C. Mock, research engineer, Bendix Research Corp., and Dr. M. J. Zucrow, vice-president, Paragon Vaporizer Corp., each presented short papers in which they outlined experimental work chiefly with substantially conventional gasoline engines modified to burn heavy fuels. Various methods of introducing the fuel to the combustion chamber of the engine were dealt with, these involving carbureting a part or all of the charge or injecting the fuel directly into the cylinder.

Garwood Industries Formed

DETROIT, March 20—The various manufacturing activities which have been conducted as the Wood Hydraulic Hoist & Body Co., for the past 22 years, will henceforth be known as Gar Wood Industries, Inc., according to Logan T. Wood, vice-president and general manager in charge of all Gar Wood's operations.

Bossert Names Shanahan

UTICA, N. Y.—George D. Shanahan has been appointed general manager of the Bossert Corp. Mr. Shanahan succeeds to the position held by the late James R. Jones, who died about three years ago. The position was held open during practically all that period because of the generally slack conditions prevailing in the stamping industry.

Aluminum Industries Reports

CINCINNATI—A net profit after taxes and charges of \$100,207 is reported by Aluminum Industries, Inc., for 1933 as compared with a net loss of \$70,889 in 1932.

City Machine Acquires Paulins

DAYTON, OHIO—City Machine and Tool Works of this city have acquired the Paulins Tool & Engineering Company, Detroit, Mich.

Vauxhall Earnings

NEW YORK—Vauxhall Motors, Ltd., controlled by General Motors, reports a net profit in 1933, after charges of £461,427 as compared with £123,349 in 1932.

Detroit S. P. Reports

DETROIT—Detroit Steel Products Company and subsidiaries reports a net loss after all charges of \$198,799 for 1933 as compared with \$787,871 loss in the previous year.

Pierce Offers Automatic Choke

Automatic chokes operated by the heat of the exhaust manifold are manufactured by the Pierce Governor Co. of Anderson, Ind., under the name of the Sisson automatic choke. The choke operating device comprises a bimetallic thermostat and an electro-magnet, both enclosed in a metallic housing which is secured to the exhaust manifold. Two different types of the device are made, one for bolting to the top and the other to the side of the manifold.

The opening of the choke valve is controlled by the thermostat. When the engine is started from cold, the choke valve will be completely closed. If the engine is warm while being cranked, the choke will be only partly closed, if the engine is hot, a magnetic lock positively holds the choke valve wide open for starting. The electro-magnet locking the choke in place is energized through the starting switch and is active only during the starting period, or as long as the starter switch is closed. When the engine is in regular operation the thermostat controls the opening of the choke valve in accordance with the temperature of the exhaust manifold.

Referring to the accompanying sectional illustration of the type mounted on top of the manifold, when the manifold is cold the bimetallic spiral will coil up and pull the thermostatic control rod B down, closing the choke valve. As the manifold warms up, the bimetallic spiral uncoils somewhat, allowing the coiled spring surrounding the thermostatic control rod to force that rod up, thus partly opening the choke valve. When the manifold is hot, the spiral uncoils sufficiently to raise the control rod to the limit, and when the starter switch is then closed and the electro-magnet energized in consequence, the upper part of the control rod is swung by the electro-magnet to the left, into the locking clip C.

Choke valves for automatic control preferably should have the valve shaft connected to the valve disk from $\frac{1}{8}$ to $\frac{3}{16}$ in. off center, and there should be

NEW DEVELOPMENTS

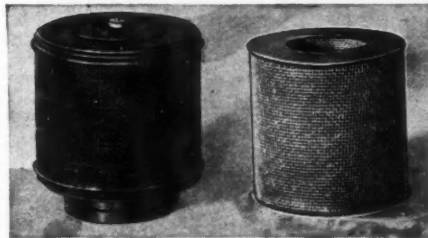
Automotive Parts, Accessories and Production Tools

a poppet or relief valve in the larger wing of the valve. Connection between the choke valve and the controller is by a simple link.

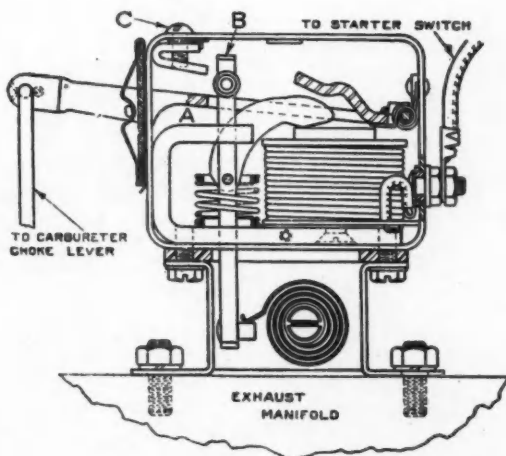
New Burgess Air Cleaner

A new air cleaner announced by the Burgess Battery Company of Madison, Wis., works on the viscous-coated fiber principle and is claimed to offer low air restriction and high cleaning capacity. Use is made of a new cellulose fiber filtering material.

Burgess air cleaners are designed for a maximum air velocity of 270 ft. per min. They are made in two standard sizes. Of these the smaller one, which is 5½ in. in diameter and 4½



in. long, has a capacity of 80 cu. ft. per min., while the larger, flat unit, which measures 9 by 17 by 2 in., has a capacity of 290 cu. ft. per min. Where larger capacities are required several units of either type may be connected up in multiple. The pressure drop for any given air speed varies somewhat with the different models.



The choke is operated by the heat of the exhaust manifold.

High Frequency Portable Tools

Two high frequency Hercules portable electric tools have been placed on the market by The Buckeye Portable Tool Co., Dayton, Ohio. The illustration shows the No. 57-1800 polishing and rubbing tool, running at 1800 r.p.m. and with capacity for an 8 or 9 in. disc with rubbing pad. The tool is 16¼ in. overall length and weighs 10½ lb. net.

The other tool is the No. 56-4700 Sander which is identical in construc-



Hercules high frequency rubbing tool

tion with the No. 57 tool but is speeded up to 4700 r.p.m. and equipped with abrasive discs or cup emery wheels.

Both machines are provided with an effective ventilating system arranged to blow the exhaust away from the operator. The tool is said to be exceptionally cool due to the insulation of the stator; also the insulation of the handles.

Explosion Proof Conduit Fitting

Pyle-O-Flex, a new watertight, va-
portight, and explosion-proof, conduit fitting is announced by The Pyle-Na-



tional Company, 1334 North Kostner Ave., Chicago, Ill. Pyle-O-Flex is said to be adapted to the safe and economical wiring of gasoline pump and explosion proof motors in filling stations, bulk gasoline stations, refineries, and for use in other places where dust creates hazardous conditions requiring explosion proof installation of electrical equipment.

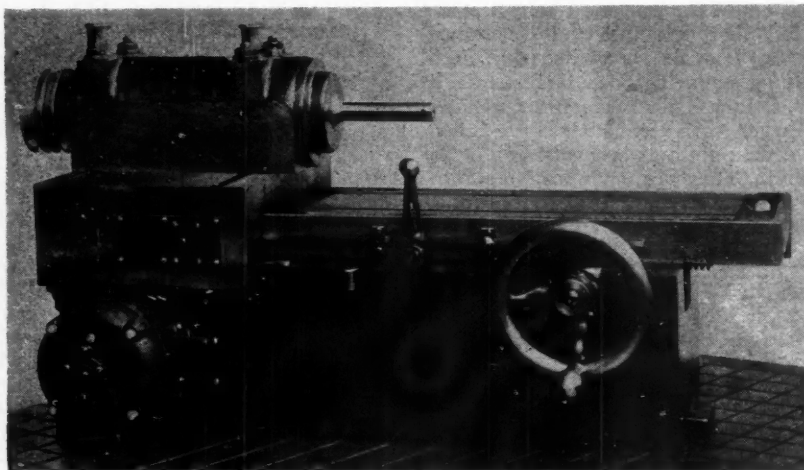
Pyle-O-Flex is said to withstand vibration, and is not only capable of withstanding 500 lb. hydrostatic pressure, but each fitting is tested against leaks under water at 50 lb. air pressure.

NEW DEVELOPMENTS

Automotive Parts, Accessories and Production Tools

Simplex Precision Boring Machine

The Stokerunit Corporation, Milwaukee, Wis., has developed a simplified precision boring machine for use with tungsten carbide or diamond tools, where a high degree of precision and finish is required together with rapid production.



Stokerunit simplified precision boring machine.

This machine is said to be adapted to a wide variety of work by provision of a quick clamping fixture designed to suit each job. Spindle speeds can be varied to take care of any reasonable range of hole sizes and provision is made in the spindle for accurately adjusting tool to hold precision tolerance.

The machine consists of a bed having one V and flat way in which is built the gear reducer type of feed motor and a feed screw operated by means of pick off change gears for varying the feeds. On this bed is mounted a bridge which straddles the table and supports one or two boring heads. The boring heads are individually driven by motor set behind or below the machine which is electrically interconnected so that both the spindle motor and the feed motor start and stop together. The table is mounted on the ways of the bed and carries the lever which engages the feed at any desired point. There is also a rack and pinion arrangement for traversing the table to the cut and back by means of hand wheel at right hand end. A limit switch arrangement provides for stopping table feed of the spindle motor at the end of cut so that the work may be withdrawn with the spindle stopped.

The spindle is provided with a precision ball bearing on the pulley end and a long lead-bronze bushing on the front end which is made with a taper on the outside, permitting it to be adjusted very closely to the spindle. A built-in fan provides circulation of air around the front spindle bearing to dissipate heat and permit a close running feed on the spindle. The spindle bear-

ing is precision bored in place on the machine, this construction permitting

high spindle speed, speeds as high as 7000 r.p.m. being practicable.

Improved Tool Grinder

The new No. 2A Tool Grinder recently announced by Wm. Sellers & Co., Inc., Philadelphia, Pa., is a completely redesigned and modernized machine, built to meet the exacting requirements for grinding cemented carbide tools as well as the flexibility for handling other materials.

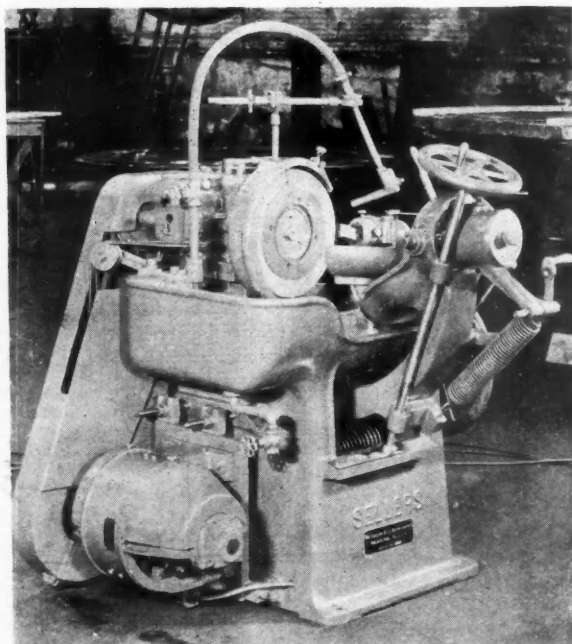
A most important change is the spindle construction. To avoid vibration or looseness of the spindle the machine embodies a special preloaded ball bearing mounting instead of the plain bronze bushing used in the earlier model.

The method of driving the spindle has also been modernized, now using a Vee-type belt with the pulley mounted close to the bearings.

The axial oscillation of the spindle has been improved. On the old machine this was obtained by an unprotected cam which caused the spindle to move back and forth in its own bearings. Now the spindle, with its preloaded type ball bearings, is mounted in a large bronze sleeve, which is oscillated axially by a protected cam revolving at a fixed speed and arranged with a heavy coiled spring to keep the sleeve and cam in positive contact.

The wheel guard has been modified so that now it can be readily removed after merely loosening one knurled nut. This is particularly advantageous where both cemented carbide and high speed steel are being ground on the same machine because grinding wheels can be inter-changed so rapidly.

The new machine, although heavier and more substantial than the old model, requires less floor space.



Wm. Sellers & Co. are offering an improved tool grinder

Harteg Named Factory Manager

DETROIT.—Fred A. Harteg, formerly production manager of the Ferro Stamping Company, has been appointed factory manager of Ackerman-Blaesser-Fezzey, Inc., Detroit.

Evans, Jr., Elected

DETROIT, March 12.—E. S. Evans, Jr., was elected a director of Evans Products Co., at the annual meeting recently. Mr. Evans succeeds W. R. Angell, resigned. He was also made vice-president. All other directors and officers were re-elected.

New 130 H.P. Hall-Scott Engine

PHILADELPHIA — The Hall-Scott Motor Company, which brought out a six-cylinder horizontal 180-hp. engine for bus service last year, now has added a smaller engine of the same type, rated at 130 hp.

New Doman-Marks Engine

AMESBURY, MASS.—The Doman-Marks Engine Company of this city has added a new model to its line of direct air-cooled engines. It is known as the 6A-400, has a bore and stroke of 4½ by 5 in., and develops 111 hp. at 2600 r.p.m.

Pardee Resigns

CLEVELAND — Robert J. Pardee, who was formerly connected with the Toledo Machine Tool Co. for a period of 17 years and who was recently with the Cleveland Punch & Shear Works Company, Cleveland, Ohio, has resigned with the intention of taking a rest.

LaFrance Cuts Loss

NEW YORK—A loss after charges and all deductions of \$388,616 in 1933 is reported by American-LaFrance and Foamite Co. This compares with a 1932 loss of \$566,007.

McAleer Mfg. Report

DETROIT—McAleer Manufacturing Company and subsidiaries sustained a net loss before all charges of \$32,453 in 1933 as compared with \$113,961 in 1932.

Int. Nickel Earnings

NEW YORK—The International Nickel Company of Canada, Ltd., reports a 1933 net profit after all charges of \$9,662,584. This contrasts with net loss in 1932 of \$135,345.

BUNDYWELD STEEL TUBING *is* COPPER-COATED *inside and outside*

Bundyweld Steel Tubing is rolled from strip steel which has been previously copper-coated on two sides, and is then Copper-Hydrogen-Electric-Welded into a solid structure. This copper coating gives Bundyweld Tubing very desirable corrosion-resisting properties. Because of its ability to withstand vibration, its great strength, and recuperative properties, it has been proven superior for such installations as gas, oil, brake, and vacuum lines. It has the strength of steel with sufficient ductility to permit easy fabrication.

The reducing atmosphere of the welding process leaves the tube absolutely clean and free from scale. It may be heat-treated without injury.

Both I. D. and O. D. are held to tolerances of .003". Uniformity of wall thickness is an outstanding feature. Bundyweld tubing is furnished in base sizes of 1/8", 1/4", 3/8", 1/2", 5/8", and 3/4" in various wall thicknesses. It can be redrawn to any odd size required. Furnished in lengths or completely fabricated, either with or without fittings. Send blue prints or samples for quotations. Complete information upon request.

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Telephone Your Telegrams to **Postal Telegraph**

On November 20th, a 1½-ton Ford V-8 truck loaded down with over 4,000 pounds of payload left Atlantic City for Los Angeles. This heavily-laden truck crossed the continent in the amazing time of 71 hours, 12 minutes and 30 seconds... bettering by 20 hours the best time ever made by any commercial automotive vehicle.

Through desert heat and mountain cold, through sand and snow, for 2,945 miles this truck kept going, lubricated with Texaco

March 24, 1934

Crack-proof Motor Oil and Texaco Greases, powered by Texaco *Fire-Chief* Gasoline. Only 5 quarts of oil were consumed. So well did Texaco lubricants function that the motor was not overheated at any time, and at the end of the trip was found to be in perfect condition.

Mr. Neiman, President of Neiman Motors, Incorporated, Ford Distributor in Philadelphia, personally selected Texaco Products for this remarkable demonstration of fast commercial transcontinental trucking.

Automotive Industries